"EMPOWERMENT THROUGH TECHNOLOGICAL EXCELLENCE"

GENBA SOPANRAO MOZE COLLEGE OF ENGINEERING

S. No. 25/1/3, Balewadi, Pune – 411 045

(Approved by AICTE and Govt. of Maharashtra, Affiliated to Savitribai Phule Pune University)

DTE Code - EN6144 University Affiliation ID - PU/PN/ENGG/138/1999

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Founder President: Shri RambhauMoze

3.3.1 Number of research papers published per teacher in the Journals notified on UGC care list during the last five years

3.3.1.1 List of Papers Published during the AY: 2022-23

Sr. No.	Title of the Paper	Name of the Teacher	Name of the Journal	Calendar Year of Publication	ISSN Number
1	Experimental study on behavior of pervious concrete in strength and permeability by changing different parameters	Dr. Ushadevi Patil	International Journal for Research in Applied Science & Engineering Technology	2023	2321-9653
2	Experimental study on behavior of pervious concrete in strength and permeability by changing different parameters	Dr. Rupali Zope	International Journal for Research in Applied Science & Engineering Technology	2023	2321-9653
3	Key challenges for adoption of electric vehicles: A case study of Indian metro city	Dr. Rupali Zope	International Journal of Research and Analytical Reviews	2023	2348-1269
4	Key challenges for adoption of electric vehicles: A case study of Indian metro city	Dr. Ushadevi Patil	International Journal of Research and Analytical Reviews	2023	2348-1269
5	Gas Leakage Automatic Alerting System with Monitoring	Prof. Pallavi Patil	International Journal of Scientific Research in Engineering and Management (IJSREM)	2023	2582-393
6	Gas Leakage Automatic Alerting System with Monitoring	Prof. Pallavi Patil	International Journal of Scientific Research in Engineering and Management (IJSREM)	2023	2582-393
7	Crop production prediction	Prof. Pallavi Patil	International Journal of Scientific Research in Engineering and Management (IJSREM)	2023	2582-393
8	Blockchain Based Payment Method for Secure Transaction	Prof. Jayshri Mankar	International Journal of Advance Research and Innovative Ideas in Education	2023	2395-4396
9	Deepfake Detection Using Deep Learning	Prof. Jayshri Mankar	International Journal of Modern Developments in Engineering and Science	2023	2583-3138
10	Gesture Recognition Based Virtual Mouse and Keyboard	Prof. Jayshri Mankar	International Journal of Advance Research and Innovative Ideas in Education	2023	2395-4395
11	DROWSINESS ALERT ALCOHOL DETECTION SYSTEM	Prof. Shweta Baviskar	IJSREM	2023	2456-3293
12	Sowing Seed AG-Robot Using Arduino Mega	Prof.Prateeksha Chouksey	IJNRD	2023	2395-4396

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13	A Comprehensive Survey on the Detection and Analysis of Sitting Posture	Prof. Prateeksha Chouksey	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
14	A MACHINE LEARNING APPROACH FOR PREDICTION OF ELECTION INFLUENCE USING SOCIAL MEADIA	Prof.Sangeeta Alagi	IRJMETS	2023	2582-5208
15	Survey on Online E-voting System Using Blockchain Technology	Prof.Sangeeta Alagi	International Journal of Advance Research and Innovative Ideas in Education	2023	2395-4396
16	FLIGHT ACCIDENT SEVERITY PREDICTION	Prof.Sangeeta Alagi	IRJMETS	2023	2582-3930
17	"RESEARCH ON HR ANALYTICS USING POWER BI AND MACHINE LEARNING"	Prof. Ashvini Bhosale	International Journal of Advance Research and Innovative Ideas in Education	2023	2321-9653
18	RESEARCH PAPER ON DRIVER SLEEPINESS DETECTION SYSTEM	Prof. Ashvini Bhosale	IRJMETS	2023	2582-5208
19	Fraud Detection in Credit Card Automated System using ML with AWS SageMake	Prof. Ashvini Bhosale	International Journal for Research in Applied Science and Engineering Technology	2023	2321-9653
20	Child Immunization System : A Survey	Prof. Supriya Kamble	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
21	Blockchain Based Health Care System: A Comprehensive	Prof. Supriya Kamble	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
22	Handwritten Text Recognition Using CNN	Prof. Supriya Kamble	International Journal of Advance Research and Innovative Ideas in Education	2023	2395-4396
23	Machine Learning Based Child Immunization System	Prof. Supriya Kamble	GIS SCIENCE JOURNAL	2023	1869-9391
24	HEALTH CARE PRIVACY APPROACH USING BLOCKCHAIN TECHNOLOGY	Prof. Supriya Kamble	IRJMETS	2023	2582-5208
25	A Survey on Handwritten Text Recognition	Prof. Supriya Kamble	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
26	Heart Disease Prediction Using Machine Learning Techniques	Prof. Bharti Kudale	INTERNATIONAL RESEARCH JOURNAL OF MODERNIZATION IN ENGINEERING TECHNOLOGY AND SCIENCE	2023	2582-5208
27	Vehicle Detection using Deep Learning	Prof. Pranjali Ghode	GIS SCIENCE JOURNAL	2023	1869-9391

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28	VEHICLE DETECTION ALGORITHM ANALYSIS: A SURVEY	Prof. Prerna Rawat	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
29	Pneumonia and COVID-19 Detection on Chest X-Ray Images using Improved CNN	Prof. Pranjali Ghode	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
30	Object detection analysis based on Machine Learning Algorithms	Prof. Prerna Rawat	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
31	Medicine Identification Application for Visually Impaired People Using Images in Machine Learning	Prof.Prateeksha Chouksey	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
32	Detection and Analysis of Sitting Posture in Real Time Based on Keras Framework	Prof.Prateeksha Chouksey	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
33	Third - Eye Aid for Blind (IMPLEMENTATION PARER)	Prof.Prateeksha Chouksey	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
34	Online E-voting system using blockchain technology	Prof.Sangeeta Alagi	IRJMETS	2023	2582-5208
35	A review: Driver Drowsiness Detection System	Prof. Supriya Kamble	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
36	A review: an enhanced E-health system using permissioned blockchain based identity management and user authentication scheme	Prof.Sangeeta Alagi	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
37	ASD Detection System	Prof. Sangeeta Alagi	International Journal for Research in Applied Science and Engineering Technology	2023	2321-9653
38	Detection of Emerging Fake News Trends using Machine Learning	Prof. Kalyani Zore	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
39	Block Chain Based NFT Market Place	Prof. Kalyani Zore	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
40	Fake Product Detection Using Image Processing in Blockchain	Prof. Shweta Baviskar	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
41	PLANT DISEASE IDENTIFICATION	Prof.Ashvini Bhosale	IJCRT	2023	2582-3930
42	A review: Combustion Detection System	Prof. Supriya Kamble	International Journal of Scientific Research in Engineering and Management	2023	2582-3930

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43	Border Surveillance System	Prof. Ashvini Bhosale	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
44	MOUSE CURSOR CONTROL USING HAND GESTURE	Prof. Neelam Jadhav	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
45	AI Resume Analyzer Using Natural Language Processing and Data Mining	Prof. Jayshri Mankar	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
46	Cryptoshield Fir System Using Blockchain	Prof. Jayshri Mankar	International Journal of Creative Research Thoughts	2023	2320-2882
47	Safe Lid Vision : Machine Learning for Helmet Detection	Prof. Pranjali Ghode	GRADIVA REVIEW JOURNAL	2023	0363-8057
48	Employee Turnover Prediction Using Machine Learning	Prof. Neelam Jadhav	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9798
49	Patient Identification and Healthcare System	Prof. Shweta Baviskar	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
50	SMARTVOTEX - EMPOWERING ELECTIONS WITH BLOCKCHAIN	Prof. Pranjali Ghode	INTERNATIONAL RESEARCH JOURNAL OF MODERNIZATION IN ENGINEERING TECHNOLOGY AND SCIENCE	2023	2582-5208
51	An Analysis of Decentralized and Centralized Freelancing	Prof.Prateeksha Chouksey	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
52	Scrutiny on Fundus Examination	Prof.Prateeksha Chouksey	GRADIVA REVIEW JOURNAL	2023	0363-8057
53	Automated Detection of Oral Lesions based on Deep Learning for Early Detection of Oral Cancer	Prof.Rahul Kumar	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
54	DIET ALCHEMIST	Prof. Ram Totkar	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
55	CR System with Efficient Spectrum Sensing and Optimized Handoff Latency to Get Best Quality of Service	Dr. Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
56	Deep Belief Network Model for Detection of an Outlier in Healthcare Data	Dr. Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799

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57	Enhanced Study of Deep Learning Algorithms for Web Vulnerability Scanner	Dr.Jambi Ratna Raja Kumar	International Journal on Recent and Innovation Trends in Computing and Communication	2023	2331-8169
58	Enhancing Cancer Immunotherapy Response Prediction using Multi-omics Integration and Deep Learning	Dr.Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
59	Gas Sensor Array Drift in an E-Nose System: A Dataset for Machine Learning Applications	Dr.Jambi Ratna Raja Kumar	International Journal on Recent and Innovation Trends in Computing and Communication	2023	2331-8169
60	Introduction of machine learning with applications to communication system	Dr.Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
61	Integration of Artificial Intelligence into Operations and Monitoring of 3R Manipulator	Dr.Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
62	EEG Signal Processing for the Identification of Sleeping Disorder Using Hybrid Deep Learning with Ensemble Machine Learning Classifier	Dr.Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
63	Artificial Intelligence based Agricultural Chatbot and Virtual Assistant for Delivery of Harvested Crops	Dr.Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
64	Analysis of Critical Diseases from ECG Signal Using Hybrid CNN and LSTM	Dr.Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
65	A Comparative Study of Machine Learning Algorithms for Image Recognition in Privacy Protection and Crime Detection	Dr.Jambi Ratna Raja Kumar	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
66	Green Technology Implementation for Environmental Sustainability; Application and Challenges	Dr. Ratnaraja Kumar Jambi	Journal of Informatics Education and Research	2023	1526-4726
67	Observation on the Information Retrieval Algorithm Based on Enterprise Correlation Financial Analysis under the Background of Big Data	Dr. Ratnaraja Kumar Jambi	International Journal of Intelligent Systems and Applications in Engineering	2023	2147-6799
68	PREDICTION OF PNEUMONIA DISEASE FROM X-RAY IMAGES USING A MODIFIED RESNET152V2 DEEP LEARNING MODEL	Dr. Ratnaraja Kumar Jambi	Journal of Theoretical and Applied Information Technology	2023	1992-8645
69	Chemical Protected Face Detection using Machine Leaning	Dr.Jambi Ratna Raja Kumar	European Chemical Bullet	2023	10571-10577

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70	Computer in Digital Forensics using Machine Learning and Big date	Dr.Jambi Ratna Raja Kumar	European Chemical Bullet	2023	10562-10570
71	Controlled Motor Pump using Arduino	Prof. Snehal Ranit	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
72	Spy Robot Using Microcontroller	Prof. Reena Asati	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
73	Design and Implimentation of Vehicle Tracking System With GPS	Prof. Reena Asati	International Journal for Research in Applied Science and Engineering Technology	2023	2321-9653
74	Password based Doorlock System using micrcontroller	Prof. Snehal Ranit	International Journal for Research in Applied Science and Engineering Technology	2023	2319-8753
75	Novel Approach for Vehicle Accident Detection	Prof. Patwardhan Sushma	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
76	Wind Speed Monitoring System For Sailing	Prof. Patwardhan Sushma	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
77	IoT Based EV Charger Using Arduino UNO	Prof. Patwardhan Sushma	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
78	Electronic Jacket for Women safety	Prof. Toke Harshalata	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
79	Smart Energy Meter	Prof. Toke Harshalata	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
80	VOICE CONTROLLED LED & MOTOR USING RF	Prof. Toke Harshalata	International Research Journal of Modernization in Engineering Technology & Science	2023	2582-5208
81	Advanced Footsteps Power Generation System	Prof. Toke Harshalata	International Journal of Advanced Research in Computer and Communication Engineering.	2023	2278-1021
82	Password Based Circuit Breaker Control	Prof. Patwardhan Sushma	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801

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83	Automatic Railway Gate Control Using Microcontroller	Prof. Patwardhan Sushma	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
84	Water pollution Monitoring system Using RC Boat	Prof. Reena Asati	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
85	Rain Sensing Automation Wiper	Prof. Reena Asati	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
86	Rakshak-Smart & Intelligent Army Jacket	Prof. Megha Beedkar	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
87	Smart Helmet Safety Using- ATMEGA 32	Prof. Kanchan Shirbhate	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
88	SMS voting system using 8051 microcontroller	Prof. Sujata Girawale	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
89	Industrial Control using CAN Bus Communication with Embedded System	Prof. Sujata Girawale	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
90	IOT based undergroubd cable Line fault detection	Prof. Sujata Girawale	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
91	Review on IOT based Solar Tracking & Monitoring Syatem with ESP32	Prof. Aishwarya Sankpal	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
92	Unlock door with your face using rasp-Pi	Prof. Rohini Ghodke	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
93	RFID & GSM based Automatic Rationing System using STM32	Prof. Snehal Ranit	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
94	Battery Management System with Cloud for Electric Vehicles	Prof. Reena Asati	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
95	Generate Electricity by Waste material	Prof. Patwardhan Sushma	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
96	Solar Wireless Electric Vehicle Charging(Dynamic Charging)	Prof. Toke Harshalata	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
97	Movementable Robotic Arm using Micro-Contoller	Prof. Sujata Girawale	International Journal of Research Publication and Reviews	2023	2582-7421

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98	Solar Based Weather Monitoring System	Prof. Kanchan Shirbhate	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801
99	Fake Currency Detection using Image Processing	Prof. Swati Gaikwad	International Journal for Science and Advance Research In Technology	2023	2395-1052(O)
100	Detection of Fake Currency using Image Processing Techniques	Prof. Swati Gaikwad	International Journal for Science and Advance Research In Technology	2023	2395-1052(O)
101	DETECTION OF VEHICLE NUMBER PLATE IN MACHINE LEARNING	Prof. Swati Gaikwad	INTERNATIONAL RESEARCH JOURNAL OF MODERNIZATION IN ENGINEERING TECHNOLOGY AND SCIENCE.	2023	2582-5208
102	Health Cautious System In Emergency Situation	Prof. Swati Gaikwad	International Journal for Science and Advance Research In Technology	2023	2395-1052(O)
103	THE SURVEY ON AN ANDROID BASED APPLICATION FOR WOMEN'S SAFETY	Prof. Ketaki Katre	International Journal of Advance Research and Innovative Ideas in Education	2023	2395-4396(O)
104	AN ANDROID BASED APPLICATION FOR WOMEN'S SAFETY	Prof. Ketaki Katre	Science, Technology & Development Journal	2023	0950-0707(O)
105	College Student's Smart Card	Prof. Ketaki Katre	International Journal for Science and Advance Research In Technology	2023	2395-1052(O)
106	College Student's Smart Card and Management System	Prof. Ketaki Katre	International Journal of Innovative Research in Computer and Communication Engineering	2023	2320-9801(O)
107	Survey on Smart Bin Using IoT	Prof. Ketaki Katre	International Journal for Research in Applied Science and Engineering Technology	2023	2321-9653(O)
108	Smart Bin Using IoT	Prof. Ketaki Katre	International Journal for Research in Applied Science and Engineering Technology	2023	2321-9653(O)
109	Alzheimer's Disease Detection using Machine Learning	Prof. Gayatri Patil	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208(O)
110	Alzheimer's Disease Detection using Machine Learning	Prof. Gayatri Patil	International Journal of Advance Research and Innovative Ideas in Education	2023	2395-4396(O)
111	Suspicious Activity Detection using Deep Learning	Prof. Kaveri B. Kari	Journal of Emerging Technologies and Innovative Research	2023	2349-5162(O)
112	Suspicious Activity Detection using Deep Learning	Prof. Kaveri B. Kari	International Journal of Advance Research and Innovative Ideas in Education	2023	2395-4396(O)

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113	Placement Prediction using Machine Learning	Prof. Kaveri B. Kari	International Journal of Advance Research and Innovative Ideas in Education	2023	2395-4396(O)
114	Placement Prediction using Machine Learning	Prof. Kaveri B. Kari	International Journal for Science and Advance Research In Technology	2023	2395-1052(O)
115	VIZALGO	Prof. Kaveri B. Kari	Journal of Emerging Technologies and Innovative Research	2023	2349-5162(O)
116	Easy Typing using Transliteration	Prof. Priyanka Mane	Journal of Emerging Technologies and Innovative Research	2023	2349-5162(O)
117	Automatic Image Captioning	Prof. Priyanka Mane	Journal of Emerging Technologies and Innovative Research	2023	2349-5162(O)
118	Green Cloud Comupting: Challenges and Solutions	Prof. Priyanka Mane	European Chemical Bulletin	2023	6828 – 6831
119	Simple typing using API	Prof. Priyanka Mane	International Journal of Creative Research Thoughts	2023	2320-2882
120	Classification Of Plant Leaf Disease Using Machine Learning & Pre-Processing Techniques	Prof. Sana Shaikh	International Journal for Science and Advance Research In Technology	2023	2395-1052
121	Android Application For Smart Parking System	Prof. Sana Shaikh	Journal of Emerging Technologies and Innovative Research	2023	2349-5162
122	Peer-to-PeerCar Sharing System using Blockchain Technology	Prof. Aparna Patil	International Journal for Research In Applied Science & Engineering Technology	2023	2321-9653
123	Classification Of Plant Leaf Disease Using Machine Learning & Pre-Processing Techniques	Prof. Sana Shaikh	Journal of Emerging Technologies and Innovative Research	2023	2349-5162
124	A Review On Revolutionizing Crowdfunding: A Hybrid Platform for the Future	Prof. Kaveri B Kari	International Journal Of Advance Research And Innovative Ideas In Education	2023	2395-4396
125	Survey on Unified Campus Portal system	Prof. Pradnya Patange	International Journal Of Innovative Research in computer and Communication Engg	2023	2320-9801, p2320-9798
126	Smart Wearable Device For Child Safety By Using IOT	Prof. Pradnya Patange	International Journal of Scientific Research in Engineering and Management (IJSREM)	2023	2582-3930
127	Road safety Alert System	Prof. Pradnya Patange	International Journal of Scientific Research in Engineering and Management (IJSREM)	2023	2582-3930
128	NFT MARKETPLACE	Prof. Megharaj Patil	International Journal of Scientific Research in Engineering and Management	2023	2582-3930

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129	Survey Paper on Online Platform for Visualizing Algorithm	Prof. Megharaj Patil	International Journal of Scientific Research in Engineering and Management	2023	2582-3931
130	AN AI BASED EVENT RECOMMENDATION & MANAGEMENT SYSTEM	Prof. Megharaj Patil	Journal of Emerging Technologies and Innovative Research	2023	2349-5162
131	AI and IOT Based Smart Classroom	Prof.Swati Gaikwad	Journal of Emerging Technologies and Innovative Research	2023	2349-5162
132	Review On: Email System using Speech Recognition	Prof.Swati Gaikwad	International journal of Scientific Research in Engineering & Management	2023	2382-3930
133	A Review on Hand Gesture-Based Virtual Mouse Control Systems	Prof.Swati Gaikwad	International journal of Scientific Research in Engineering & Management	2023	2382-3930
134	Review on WebApp Vulnerability Scanner	Prof.Ketaki Ganesh Katre	International Journal of Scientific Research in Engineering and Management (IJSREM)	2023	2582-3930
135	A review paper on flutter-based solution for efficient vehicle charging infrastructure	Prof.Ketaki Ganesh Katre	Journal of Emerging Technologies and Innovative Research	2023	2349-5162
136	Survey paper on farmer products auction system	Prof.Ketaki Ganesh Katre	International Journal Of Innovative Research in computer and Communication Engg	2023	2320-9801
137	Review on blood bank management system	Prof. Sana Shaikh	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
138	Dyslexia Prediction using Deep Learning	Prof. Sana Shaikh	International Journal of Scientific Research in Engineering and Management	2023	2582-3930
139	An Online Web Portal for Donating unused Medicine to NGOs	Prof. Priyanka Mane	Journal of Emerging Technologies and Innovative Research	2023	2349-5162
140	Finite Element Analysis and Design optimization of composite T-joints for enhanced maritime and aerospace applications	Prof. Sachin Yadav	Engineering Solid Mechanics	2023	2291-8752
141	Design and Testing of composite material T joint for Naval Ship Using FEA	Prof. Sachin Yadav	IJSRST	2023	2395-602X
142	POWER GENERATION BY SCREW TURBINE WITH DIFFERENT ANGLE OF INCLINATION	Prof. Sachin Yadav	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208
143	POWER GENERATION BY SCREW TURBINE WITH DIFFERENT ANGLE OF INCLINATION	Dr. Prathamesh S. Gorane	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208

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144	POWER GENERATION BY SCREW TURBINE WITH DIFFERENT ANGLE OF INCLINATION	Dr. Vijay B. Roundal	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208
145	DESIGN AND MANUFACTURING OF SMART SOLAR PANEL CLEANING SYSTEM	Prof. Sachin Yadav	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208
146	DESIGN AND MANUFACTURING OF SMART SOLAR PANEL CLEANING SYSTEM	Dr. Prathamesh S. Gorane	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208
147	DESIGN AND MANUFACTURING OF SMART SOLAR PANEL CLEANING SYSTEM	Dr. Vijay B. Roundal	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208
148	DESIGN AND MANUFACTURING OF PEANUT SHELLER MACHINE	Dr. Vijay B. Roundal	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208
149	DESIGN AND MANUFACTURING OF PEANUT SHELLER MACHINE	Prof. Sachin Yadav	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208
150	DESIGN AND MANUFACTURING OF PEANUT SHELLER MACHINE	Dr. Prathamesh S. Gorane	International Research Journal of Modernization in Engineering Technology and Science	2023	2582-5208
151	Numerical investigation of pull in control of rectangular AA1050 rolling ingot through design of convex mould during direct chill casting process	Dr.Ritesh Fegade	Engineering Research Express	2023	2631-8695
152	Development and Evaluation of Extended Text Pre-processing Techniques for Hindi Document Clustering	Prof. Mukta M. Deshpande	International Journal of INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING	2023	2147-6799
153	An ICT based collection development model for engineering college's libraries: Challenges and problem	Dr. Giridhar U. Dhawle	International Journal of Advanced Academic Studies	2023	2706-8927
154	An ICT based collection development model for engineering college's libraries: Challenges and problem	Monali Sharad Jadhav	International Journal of Advanced Academic Studies	2023	2706-8928
155	Gas Sensor Array Drift in an E-Nose System: A Dataset for Machine Learning Applications	Prateeksha Chouksey	The International Journal of Innovative Research in Computer and Communication Engineering	2023	2331-8169
156	HUMAN-COMPUTER INTERACTION USING MACHINE LEARNING	Dr. Ratnaraja Kumar Jambi	Computer Integrated Manufacturing Systems	2023	1006-5911
157	Review of CaRP : CAPTCHA as Graphical Password	Prof. Shilpa Bhoyar	Journal of Electronics Design Engineering	2022	-

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158	Analysis & optimization to improve the tedious tender process in civil construction industry	Shilpa Mahajan	International Journal of scientific research in engineering and management	2022	2582-3930
159	Home Security System using Arduino Uno (Implementation)	Prof. Pallavi Patil	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	2022	2321-9653
160	DETECTION OF SKIN CANCER DISEASE USING DEEP LEARNING ALGORITHM	Prof.Prateeksha Chouksey	International Journal of Engineering Applied Sciences and Technology	2022	2455-2143
161	Smart Emotion Learner Using viola Jones Algorithm	Prof. Aparna Patil	International Journal of Innovative Research in Computer and Communication Engineering	2022	2320-9801
162	A Framework for Analyzing Real-Time Tweets to Detect Terrorist Activities	Prof. Aparna Patil	International Journal of Innovative Research in Computer and Communication Engineering	2022	2320-9801
163	Efficient Software Defects Predication Using SVM	Prof.Aparna Patil	International Journal of Research Publication and Reviews	2022	2582-7421
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Experimental Study on Behavior of Pervious Concrete in Strength and Permeability by Changing Different Parameters

Ushadevi Patil[1], Rupali Zope[2]
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Abstract: A type of concrete with a high void or porosity that allows water to penetrate through it is called pervious concrete. Pervious concrete behavior was examined using various sizes of aggregate (20mm and 10mm), weight/concentration ratios (0.34 & 0.28), super plasticizers (Aura mix 400 & Conplast SP 430) and different percentages of fiber (i.e. 1% & 2%). Compressive strength, flexural strength, permeability test criteria were used to describe the similarity. The results show that decreasing the w/c ratio from 0.34 to 0.28 results in a moderate increase in strength and super plasticizer (Conplast SP 430) provides good strength. The addition of fiber, at 1% by weight of cement, significantly increased strength. However, porosity was the most important factor in calculating the efficiency of porous concrete, which was affected by the addition of a certain percentage of fiber. The findings of this study provided useful information about the effectiveness of w/c ratio, super plasticizer and fiber in achieving the optimal strength. drain ability balance suitable for various urban uses.

Keywords: Pervious concrete, super plasticizer, polypropylene fiber of 12mm, compressive strength, flexural strength, permeability test

I. INTRODUCTION

Pervious concrete refers to concrete that allows water to penetrate through it due to its high void or porosity. Because it is an environmentally friendly artifact, the EPA (Environmental Protection Agency) has recognized it as best management practice for storm water management due to the limited amount or absence of fines in pervious concretes extremely good quantity pores that facilitate store storm water inside them and cut back runoff amount in an extremely scientific manner.

Pervious concrete, also known as porous, gap graded or permeable concrete is made up primarily of normal portland cement, course aggregate and water. Fine aggregates are either absent or present in very small quantities, i.e. 10% by weight of the total aggregates. In general, aggregates that pass through a 12.5mm sieve and are retained on a 10mm sieve are used when making porous concrete.

Several studies have shown that previous concrete has the following advantages:

1) Allow for natural recharge of ground water and avoid water evaporation from the soil beneath.
2) Sidewalks, sidewalks, pathways, and large parking lots.
3) Pervious concrete is used as a sub-base for traditional concrete pavements, as well as for pavement edge drains.
4) Private roads and low-water crossings.
5) Vehicle noise is reduced, and there is no plash on the pavement surface, so there is no glisten throughout the night.

A Objective

1) The primary goal of this paper is I to investigate the performance and behavior of the open Structure of pervious concrete in Indian climatic conditions.
2) To compare the strength properties of conventional and pervious concrete.
3) Research into the effects of fine aggregate, w/c ratio, and admixture on the properties of pervious concrete.

B Scope

1) A porous concrete pavement system can be an effective tool for storm water management.
2) Storm water retention areas may be reduced or eliminated as well.
3) Allowing rainfall to infiltrate can increase ground water level and aquifer recharge.

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KEY CHALLENGES FOR ADOPTION OF ELECTRIC VEHICLES: A CASE STUDY OF INDIAN METRO CITY

[1]Rupali Zope, [2]Ushadevi Patil, [3]Jagdish Khod
[1]Assistant Professor, [2]Professor, [3]Student
[1-3]Civil Engineering Department,
[1-3]G.S. Moze College of Engineering, Balewadi, Pune, India

Abstract: Rapid increase in demographic growth in Indian cities has resulted into exponential growth in number of vehicles registered. It further led to different issues in urban areas like congestion, fuel consumption, pollution, accidents etc. The issues of fuel consumption and emission have emphasized the need of alternate fuel technology. Electric Vehicle (EV) is a prominent technology for the mitigation of these issues. EV is one of the promising technologies adopted for reduction for emission and conventional fuel consumption. Current study is an attempt made to understand acceptance of electric vehicles. Pune city is selected as case study for analysis. Total eight variables namely EV mileage range, charging point availability, maintenance of EV, emission consideration, incentive based purchase, fuel efficiency of EV, age of existing vehicle, occupation are used for understanding their influence on EV adoption. The study has used Simple Linear Regression for analysis. Variables like EV mileage range, Charging point availability, Maintenance of EV, Fuel Efficiency of EV are found as most influencing variables for adoption of EV. Insights gained from the current study throws light on user's perception towards adoption of EVs.

Index Terms: Electric Vehicle, user's perception, simple linear regression

I. INTRODUCTION:

The rapid urbanization in developing countries like India has led to exponential increase in the registered number of vehicles. It has further led to various issues in urban areas like traffic congestion, accidents, fuel consumption, emissions etc. Depletion of natural petroleum resources at a rapid pace is other issue of transport system. It took millions of years for natural oil to form and preservation of these resources becomes more crucial. The transport sector in India accounts for 18% of total energy consumption. This translates to an estimated 94 million tonnes of oil equivalent (MTOE) energy. With the current trends of energy consumption, India would require 200 MTOE of annual energy supply by 2030. Currently, this energy demand is fulfilled through imported crude oil. This makes transport sector more vulnerable to the international oil prices.

Another important issue of transport system is emission. In India, about 90% of carbon dioxide (CO_2) emissions from transportation come from the road sector. TERI's study found that on-road vehicles are responsible for 24-25% and 15-17% of PM10 pollution in winter and summer, respectively. For PM2.5, the contribution of on-road vehicles was 28-30% in winter and 17-20% in summer. 81% of NOx pollution was from the on-road vehicles in Delhi. The study by IIT Kanpur revealed that the transport sector is the second-largest source and, in winter, contributes 19.67% and 25.14% of PM10 and PM2.5 respectively. CPCB's study identified 6.6% of PM10 and 17.5% of NOx emissions to be coming from the transport sector. The study carried out by Nagpure et al. (2016) found that heavy commercial vehicle (HCVs) are the major contributor to PM10 emissions (33- 45%), followed by light commercial vehicles (LCVs), two-wheelers, and cars in the NCT of Delhi. The deposition of all these gases in the atmosphere has resulted into adverse effects on human health. Different human health issues like nausea, difficulty in breathing and skin irritations, birth defects, immunosuppression and cancer can be observed. All these aspects of transport system highlighted the need of alternate fuel technology. Electric mobility provides a viable alternative to address these challenges of transport system. Electric mobility will help to provide a balancing energy demand and environmental sustainability. Considering all these benefits of electric vehicles, current study focused on addressing challenges for adoption of electric vehicles. The study focused on evaluation of user's perception for adoption of electric vehicles.

The entire paper is divided into five sections. First section is the introductory section of the study while second section of the paper is about literature review. Third section elaborates the methodology adopted for the conduction of the study. Fourth section of the study explains the findings of the study while lasts section is about conclusion.

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KEY CHALLENGES FOR ADOPTION OF ELECTRIC VEHICLES: A CASE STUDY OF INDIAN METRO CITY

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Gas Leakage Automatic Alerting System with Monitoring

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ABSTRACT

One of the biggest problems in a person's life is a gas leak. If the leakage is not discovered at this point, it may also have many negative effects, including property loss and human loss. Everyone must be aware of leaking priory in order to prevent these losses. Our task is to implement a protective device for leak detection. Using sensors and sounds, we can identify leaks when they occur. Buzzer with LCD display alerts candidates and family members who are lawfully present, and if the leakage intensity increases, it also alerts the fire station and the neighborhood, together with Buzzer sound and LCD display, for rescue. Gas leaks can be dangerous and even fatal if they go unnoticed. We have created a gas leakage system using IOT, which comprises database logging, prediction, and smart alerting methods that involve text message delivery to the relevant authority. By using the XAMPP server to save the sensor values in the database, database logging is carried out. For prediction, the Naive Bayes method is utilized.

Keywords: - Node MCU, ESP8266 WIFI module, Buzzer, GSM module, MQ6 Sensor, LPG.

1. INTRODUCTION

Gas is a common fuel in today's modern world, especially gas, which is utilized widely in everything from homes to restaurants to enterprises. The gas is extremely significant to life. Thus, a situation arises where gas utilization is likely to

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Gas Leakage Automatic Alerting System with Monitoring

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ABSTRACT

Perhaps of the most concerning issue in an individual's life is a gas spill. In the event that the spillage isn't found as of now, it might likewise make many adverse consequences, including property misfortune and human misfortune. Everybody should know about spilling convent to forestall these misfortunes. Our errand is to carry out a defensive gadget for spill discovery. Utilizing sensors and sounds, we can distinguish spills when they happen. Bell with LCD show alarms applicants and relatives who are legally present, and assuming the spillage power increments, it additionally cautions the fire station and the area, along with Ringer sound and LCD show, for salvage. Gas breaks can be perilous and, surprisingly, lethal on the off chance that they slip through the cracks. We have made a gas spillage framework utilizing IOT, which contains information base logging, forecast, and brilliant cautioning techniques that include instant message conveyance to the pertinent power. By involving the XAMPP server to save the sensor values in the data set, data set logging is done. For expectation, the Guileless Bayes strategy is used.

Keywords: - Node MCU, ESP8266 WIFI module, Buzzer, GSM module, MQ6 Sensor, LPG.

1. INTRODUCTION

Gas is a typical fuel in the present current world, particularly gas, which is used generally in all that from homes to eateries to endeavors. The gas is very vital for life. Consequently, a circumstance emerges where gas use is probably going to spill. In the event that the client doesn't see it in time, they are compelled to take in a ton of gas, which can be hurtful to their wellbeing or, in the most pessimistic scenario, bring about death in the event that they are in a shut space. Moreover, there is a significant gamble of fire assuming gas spills in a space that is close to combustible materials or little ignites. The Web of Things (IoT) is a worldwide organization wherein electronic parts, programming, sensors, and actuators are coordinated in furnishings, vehicles, structures, and other hardware.

These contraptions can accumulate and communicate information on the off chance that they are associated with an organization. IoT applications are being utilized all the more habitually to screen private appliances.By mechanizing the little undertakings related with an individual's all's day to day existence, the web of things intends to simplify life and quicker. Because of mechanical headways like the Web of Things, everything is turning out to be more complex today. IOT is valuable for computerizing errands, yet it likewise has a great deal of expected benefits for improving functional safety efforts.

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CROP PRODUCTION PREDICTION

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***Abstract*: Agriculture is the backbone of India as 50% of population in India depends on it, still it is one of the least paid occupations of India. Recent development in Information technology for agriculture field has become interesting research area.**

Machine learning can play a significant role in Agriculture field by increasing the crop yield production rate. Various regression algorithms can be used for predicting crop production. The aim is to develop extremely effective model for prediction of crop production with most minimal computational difficulties. By using machine learning algorithms, relative errors can be reduced which are caused by factors like weather parameters, area, pesticides, rainfall etc. The model can help farmers to know crop production in advance to plan and choose a crop that would give a better yield.

***(Keywords*: Agriculture, Crop production, Machine learning)**

1. Introduction

Since it is essential to both human and animal survival in India, agriculture is the foundation of the country's economy. The need for agricultural products will skyrocket as the world population, which was estimated at 1.8 billion in 2009, is expected to reach 4.9 billion by 2030. The need for agricultural products will increase as the world's population grows, necessitating effective farmland development and an increase in crop output. Meanwhile, crops were regularly ruined by unfavorable weather conditions as a result of global warming. Farmers are destroyed by even a single crop failure brought on by poor soil fertility, weather changes, floods, poor soil fertility, poor groundwater availability, and other similar problems. According to the geography of the area and environmental conditions, the society in other countries recommends farmers to boost the production of particular crops. The estimation and monitoring of crop production are required since the population has been growing at a much faster rate. As a result, a suitable strategy must be developed by taking the influencing factors into account for the better selection of crops with respect to seasonal variance. The primary goal of crop yield estimation is to boost agricultural crop production, and numerous proven models are utilized to do so. Forecasting, flaw detection, pattern recognition, etc. are already common industries. When there is a loss due to unfavorable conditions, the ML algorithms also assist in increasing the crop yield production rate. Regardless of the distracting environment, ML algorithms are used for the crop selection approach to reduce yield production losses. ML techniques were used to improve precision and selection stability. ML offers a number of efficient techniques that are used to identify the relationship between input and result in yield and crop prediction. For example, smart irrigation systems, crop disease prediction, crop selection, weather forecasting, and determining the minimal support price are all examples of machine techniques used in agriculture. These methods will increase field productivity while requiring less work from farmers in terms of input. Additionally, because they made use of enormous amounts of data and played a crucial part, the advancements in machines and technologies were accurate. This study examines the advantages and disadvantages of the various ML-based agriculture techniques.

2.Related Work

A paper survey is a crucial research step. Making a survey of earlier papers enables us to gain a deeper understanding of the subject and the level of advancement made in that particular area. These surveys can help us with our study and provide us with a fundamental understanding of the development process.

Random Forests for Global and Regional Crop Yield Predictions.

This article was produced by the Institute on the Environment at the University of Minnesota in St. Paul, Minnesota, 55108, in the United States. The k-nearest neighbors algorithm, Support Vector Regression, and Random Forest algorithms were employed in this study. As a result, RF is most efficient.

Applications of Machine Learning Techniques in Agriculture Crop Production.

In October 2016, the Indian Journal of Science and Technology published Volume 9(38), DOI:10.17485/ijst/2016/v9i38/95032. An enhanced indistinct cluster analysis is utilized to categories regions of interest in plants, soil, and detritus using a color image taken using GPS.

Crop Production Ensemble Machine Learning Model for

BLOCKCHAIN BASED PAYMENT METHOD FOR SECURE TRANSACTION

Prof. Jayshri Mankar[1], Mr. Abhishek Ingle[2], Mr. Shivam Gade[3], Mr. Kshitij Bramhne[4]

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ABSTRACT

There was no mechanism in place before Bitcoin that allowed any two willing parties to conduct transactions without the intervention of a third party. To prevent fraud, third parties were brought into the process. As a result, enlisting a third party resulted in additional transaction fees, which is a disadvantage of the current online transaction system. Due to the ease with which digital tokens can be reproduced and the inability of transaction parties to verify the digital currency's legitimacy, double-spending is a problem with digital currencies. Bitcoin has a process in place to prevent double-counting and ensure that each transaction is genuine. Bitcoin is a cryptocurrency that is built on encryption, blockchain, and a peer-to-peer electronic cash system. Because there are no prerequisites, the Bitcoin network is rapidly expanding. A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and re-join the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

Keyword : - *Digital Currency , Electronic Cash, Proof-of-work*

1. INTRODUCTION

In the past decade, with the popularity of digital cryptocurrencies, e.g., Bitcoin, blockchain technology has attracted tremendous attention from both academia and industry. The blockchain was first proposed in to serve as a crypto-currency transaction ledger, and is currently widely adopted for a large number of crypto-currencies, such as Ethereum, Ripple and EOS The blockchain technology guarantees the tamper-proof ledger, transparent transactions, and trustless but secure trading's in a decentralized network. Thus, the blockchain network is recently applied in a wide range of scenarios far beyond crypto-currencies, such as Internet of Things (IoT) healthcare and insurance In general, blockchain is a distributed public data-ledger maintained by achieving the consensus among a number of nodes in a Peer-to-Peer (P2P) network. More specifically, the verified transaction data is stored in a chain of blocks, i.e., a basic data structure of blockchain, and the chain grows in an append-only manner with all new verified blocks to it. This process involves several operations such as verifying transactions, disseminating blocks, and attaching blocks to the blockchain

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Deepfake Detection Using Deep Learning

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Abstract: **Four billion images are uploaded to the internet every day, according to polls. With the widespread use of digital photography, new methods for modifying image content employing tools, apps, and editing software like Adobe's have emerged. Deepfake techniques were used to create a fake movie and photos, which has raised significant public concern. The majority of face-manipulation techniques used in videos today, such as Faceswap and Deepfake, have been created successfully. It has both benefits and drawbacks. On the one hand, it broadens the application to new fields (such as visual arts, visual studies, filmmaking, etc.), but on the other, it also fosters harmful users. Consequently, we can determine whether the video is real or not by applying Deep Learning algorithms. We're going to create a system that can identify this dangerous data in order to recognise it.**

Keywords: **Deep Learning, Faceswap, DeepFake, DeepFake techniques.**

1. Introduction

Deepfakes are AI-generated or generative works of art in which the image of a person in an earlier work of art is changed to that of another person. Since deepfakes are being used more frequently to produce various types of fake information, from fake news to humbug of content, such as pornography, ragging, etc., both academic fields and the technology industry have made significant efforts to develop machine controllable detection of deepfake videos. After being deemed to be reliable sources, photos and videos are frequently used as evidence in criminal investigations to resolve legal disputes. Female reporters and journalists have already been threatened with deep-fake porn movies. Because of this, this project will contribute to the security of every woman's future. Our goal is to find harmful data so that we can honesty and keep person in protection.

A. Deep Learning

Computer and machine vision, as well as natural language processing, have all made extensive use of the effective and practical Deep Learning technique. This technology is used by Deepfakes to alter pictures and videos of people so that it is impossible for people to tell whether they are real or fake.

2. Related Work

The deepfake was mint from the affiliation of Deep Learning, fake videos created using deepfakes consists of two parts, face swapping and face reenactment. Face swapping has automatic replacement of a face in a video or image with someone else's face. This original Face swapping method can be dated by to a Reddit user post in 2017. Faceswap-GAN is a popular faceswap method. Face reenactment is a transferal of expression and pose of fake person to a targeted person in a video, while the specification of the target person remains the same using Dliband OpenCV it first detects the face in the fake image with the face detector. There have been several works considering deepfake video detection methods. For eg., The blinking rate of human beings is about once every two to ten seconds and the time for each blink about half or a quarter of a seconds. People in a deepfake videos rarely blink, making deepfake videos a bit more detectable from real videos. Apart from the manipulated contents itself, some other variable created as byproducts of the natural process can be used for deepfake detection. Compare to manual detection done by humans, Convolutional Neural Network's (CNN's) can detect deepfake contents through image analysis feature neural networks allows computers to learn from features that can be hardy noticeable human eyes.

3. Dataset

Fake videotape data (UADFV) fake image data (DARPAMedi for GAN image or videotape challenge). Face forensic, deepfake, computer generated images, and photographic images. Datasets that contain colorful face images with different judgments. Face Forensics++ provides a dataset consisting of 1000 original video sequences that have been manipulated based on four automated using different face manipulation methods, namely: Deepfakes, Face2Face, Face Swap and Neural Textures. These 5000 videos were downloaded to the University of Melbourne High Performance Computing System (SPARTAN) [24]. All h264 videos were downloaded using a 23x compression rate for time and storage efficiencies. The original videos, and the deep fake versions of these videos created using Deepfakes, Face2Face, FaceSwap and Neural Textures.

4. Methodology

Firstly, have to take a video to detect is it fake or not. After that the first step is to capture the input video into frames. The frame rate is of 30 frames per second. The second step was to detect the faces that appear in the image and label them. The

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PUNE-41 G. S. MOZE COLLEGE OF ENGINEERING

"GESTURE RECOGNITION BASED VIRTUAL MOUSE AND KEYBORD"

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ABSTRACT

will understand the gesture shown by the user and act accordingly. Now a days computer vision has reached its pinnacle, where a computer can identify its owner using a simple program of image processing. In this stage of development, people are using this vision in many aspects of day to day life, like Face Recognition, Colour detection, Automatic car, etc. In this project, computer vision is used in creating an Optical mouse and keyboard using hand gestures. The camera of the computer will read the image of different gestures performed by a person's hand and according to the movement of the gestures the Mouse or the cursor of the computer will move, even perform right and left clicks using different gestures. Similarly, the keyboard functions may be used with some different gestures, like using one finger gesture for alphabet select and four-figure gesture to swipe left and right. It will act as a virtual mouse and keyboard with no wire or external devices. The only hardware aspect of the project is a web-cam and the coding is done on python using Anaconda platform. Here the Convex hull defects are first generated and then using the defect calculations an algorithm is generated and mapping the mouse and keyboard functions with the defects. Mapping a couple of them with the mouse and keyboard, the computer

Keywords: *Hand Motion, Webcam, Vision, Finger Recognition, And Gesture Based*

INTRODUCTION

The Computer webcam is capturing the video of the person sitting in front of the computer, there will be a small green box which will be generated in the middle of the screen. In that green box, the objects shown will be processed by the code and matched with it if it matches then a red colored border will be generated, which means the computer has identified the object and then by moving the object the mouse cursor can be moved. This will not only help in the security of the computer but also help in generating a virtual computational experience. Here in the place of different objects, using hand gestures one gesture will be moving the cursor, the different gesture will be used for right click and different for left click, similarly with a simple gesture can do the keyboard functions virtually that may have been done on some keyboard as a physical aspect. It the gesture does not match the box will show an only green box when the known gesture is observed a red border will occur.

A mouse, in computing terms is a pointing device that detects two-dimensional movements relative to a surface. This movement is converted into the movement of a pointer on a display that allows to control the Graphical User Interface (GUI) on a computer platform. There are a lot of different types of mouse that have already existed in the modern days technology, there's the mechanical mouse that determines the movements by a hard rubber ball that rolls around as the mouse is moved. Years later, the optical mouse was introduced that replace the hard rubber ball to a LED sensor to detects table top movement and then sends off the information to the computer for processing. On the year 2004, the laser mouse was then introduced to improve the accuracy movement with the slightest hand movement to overcome the limitations of the optical mouse which is the

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DrowsinessAlert Alcohol Detection System

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Abstract—**Theuse of advanced driver assistance systems (ADAS) has significantly increased in recent years. Among them, drowsiness alert, alcohol detection, and collision control systems are essential for ensuring safe driving. This paper presents a comprehensive survey of the recent developments and advancements in these areas. We examine various approaches to drowsiness detection and alcohol detection, as well as collision avoidance and control strategies. Furthermore, we explore the challenges and limitations of these technologies and provide an overview of future research directions. Our findings demonstrate that these systems hold immense potential for improving road safety and reducing fatalities caused by impaired or drowsy driving.**

Keywords—Advanced driver assistance systems, drowsiness detection, alcohol detection, collision control, vehicle acceleration

I. INTRODUCTION

National Highway Traffic Safety Administration (NHTSA) has reported that motor vehicle crashes caused roughly 36,120 fatalities in the United States in 2019. A significant number of these accidents could have been prevented with the help of advanced driver assistance systems (ADAS). ADAS can help reduce or eliminate the risks associated with driving, including drowsiness, alcohol impairment, and distracted driving.Drowsiness detection systems are designed to monitor a driver's physiological and behavioral signals to determine whether they are becoming drowsy or fatigued. Alcohol detection systems, on the other hand, use various methods to analyze a driver's breath or blood alcohol content to determine their level of impairment. Collision control systems utilize sensors and algorithms to detect potential collisions and take appropriate measures to prevent them, such as alerting the driver, intervening, or even taking control of the vehicle.In this survey paper, we provide an overview of the latest advancements in drowsiness detection, alcohol detection, and collision control systems. We examine various approaches and techniques used in these system, analyze their advantages and limitations, and discuss the challenges and limitations of these systems. Additionally, we provide an overview of future research directions in this area.

II.RELATED WORK

Drowsiness detection systems have been developed using a variety of approaches. Some studies have used physiological measures such as EEG signals [1] or heart rate variability [6], while others have used behavioral measures such as eye movements or steering wheel movements [7]. Machine learning techniques have also been used for drowsiness detection, such as support vector machines [8] and deep neural networks [9]. For example, in [9], the authors proposed a drowsiness detection system that uses a CNN to extract features from eye images and achieve an accuracy of 92% in detecting drowsiness.Alcohol detection systems have also been developed using various techniques. Breathalyzers and BAC sensors are commonly used, but they require direct contact with the driver and can be invasive. Non-intrusive approaches have also been proposed, such as using infrared spectroscopy [10] or

Sowing Seed AG-Robot Using Arduino Mega

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ABSTRACT

The Internet of Things (IoT) has revolutionized the way we interact with our surroundings. It is a network of interconnected devices that are embedded with sensors, software, and other technologies to collect and exchange data. The sheer number of devices connected to the internet is growing at an exponential rate, and the potential applications of IoT are endless. IoT is useful because it allows us to collect and analyze data in real-time, enabling us to make informed decisions and optimize our operations. For example, in the industrial sector, IoT can be used to monitor equipment performance, predict maintenance needs, and prevent downtime.

In addition to its practical applications, IoT has the potential to transform entire industries and drive innovation. The data collected by IoT devices can be used to inform product design, improve customer experiences, and create new business models. However, as the number of IoT devices continues to grow, so do the concerns about data privacy and security. It is essential that companies and individuals take measures to protect their data and ensure the secure and ethical use of IoT technologies. One of the primary reasons for the popularity of IoT is its ability to automate tasks and processes. By collecting data in real-time, IoT devices can provide insights that enable businesses to optimize their operations, reduce costs, and improve customer experiences. For example, in the retail sector, IoT devices can track inventory levels and alert staff when products are running low, reducing the risk of stockouts and improving customer satisfaction. In manufacturing, IoT devices can monitor equipment performance and detect potential issues before they cause downtime, reducing production costs and increasing efficiency.

KEYWORDS:- *Internet of Things (IOT),Sowing seed robot, Agriculture automation, Ultrasonic-sensor, Precision farming, Soil, moisture sensor, Remote monitoring and control, Arduino technology.*

INTRODUCTION

The use of IoT technology in agriculture can lead to improved crop yield and reduced labour costs. By automating the process of seed sowing, farmers can save time and focus on other tasks, such as irrigation and pest control. Additionally, the data collected by the robot's sensors can be used to optimize crop growth and reduce water and fertilizer usage, leading to more sustainable farming practices. The proposed IOT-based seed sowing robot using Arduino technology has the potential to revolutionize agriculture by increasing efficiency, reducing labour costs, and improving crop yields. As the technology continues to evolve, we can expect to see more innovative applications of IoT in agriculture that will further improve the sustainability and productivity of farming practices.

Manual method includes broadcasting the seeds and fertilizers by hand. So it's time to automate the sector to overcome these problems. Innovative idea of this project is doing the processes like verifying if the soil is suitable for cultivation, seed sowing, covering the land and spraying fertilizers automatically so that human efforts will get reduced. The system will be utilized for sensing, monitoring, controlling and for communication purpose

Different sensors are used to detect parameters like soil moisture and obstacle detection. Depending upon the sensors output the microcontroller will take the necessary actions. The moisture sensor output will help to determine if the soil is suitable for cultivation. Once the soil is suitable, the seed sowing operation can be performed. The operation of robot can be controlled using an Android application

Agriculture is an essential sector that provides food and other resources for the growing population. With the advancements in technology, there is a growing need to implement smart solutions to increase efficiency and productivity in agriculture. One such solution is the use of ag-robots to automate agricultural tasks. This paper focuses on the development of a sowing seed ag-robot using the Arduino Mega 2560 microcontroller board. The ag-robot is designed to sow seeds accurately and efficiently, reducing the time and effort required for manual sowing. The use of Arduino Mega 2560 microcontroller board enables the ag-robot to perform precise and accurate sowing, making it a valuable tool in modern agriculture. This paper describes the design, development, and testing of the sowing seed ag-robot, highlighting its potential benefits and applications in agriculture.

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A Comprehensive Survey on the Detection and Analysis of Sitting Posture

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ABSTRACT - The COVID pandemic has led to a significant rise in the proportion of people who work from home, frequently without the infrastructure or ergonomic equipment that they require. User's well-being and health are seriously harmed by improper desk heights, a lack of suitable desktop chairs, and extensive laptop use. Bad posture while sitting is a major contributor to back pain, neck pain, headaches, and discomfort in the spine, which can result in spinal dysfunction and make it challenging to work for extended periods of time. Over time, but never proven to be diminishing, the number of patients with lower back discomfort. Additionally, this kind of illness affects about 20% of the populace, particularly those working in the software sector. The ability to better comprehend human movement and avoid musculoskeletal problems has led to an increase in the importance of posture detection and analysis in recent years. The interest in creating automated systems for posture detection and analysis has grown as high-quality, reasonably priced sensors have become more widely available. Due to their capacity to accurately and efficiently extract complex characteristics from images, deep learning-based techniques have become a promising solution to this issue. The Keras framework is used in this survey study to review the most recent techniques for detecting and analysing sitting position. The responsible people can use the knowledge created here to develop their strategies for more effectively reducing the nation's back pain challenges.

Key Words: Sitting posture Analysis, Deep learning, Keras, Health.

1. INTRODUCTION:

The maintenance or improvement of health involves preventing, diagnosing, and treating illnesses, injuries, and other physical and mental impairments in humans. Due to the COVID pandemic, more people are now working from home and using their laptops or desktops for extended periods of time. It has been observed that the employees do not set up their workspace with the ergonomic equipment or infrastructure that is required. The usage of incorrect desk heights, a lack of appropriate desk chairs, and excessive laptop use while seated incorrectly can be serious issues for employees. This could lead to spinal dysfunction, headaches, neck pain, back pain, and even back discomfort. The number of persons who experience back problems grows with time but never declines. Additionally, since 20% of the population is affected by these illnesses, workers in the software sector should be concerned. Due to their potential to enhance our comprehension of human movement and avoid musculoskeletal problems, posture detection and analysis have grown in significance during the past several years. A growing number of people are interested in creating automated systems for posture detection and analysis due to the accessibility of high-quality, reasonably priced sensors. Since they can accurately and efficiently extract complex information from images, deep learning-based systems have become a promising alternative to traditional methods.

In this overview study, we examine the most recent approaches to sitting posture analysis and detection within the Keras framework. We give an overview of the Keras framework and discuss how it can be used to build models for posture detection that are based on deep learning. Additionally, utilising the Keras framework, we discuss the most recent cutting-edge techniques for posture identification and analysis. Finally, we discussed the challenges and applications of the development of sitting posture detection systems.

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A MACHINE LEARNING APPROACH FOR PREDICTION OF ELECTION INFLUENCE USING SOCIAL MEADIA

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ABSTRACT

A daily newspaper is an essential component of daily life because it serves as a constant source of information and contains all kinds of information. Social media dominates the generational landscape in the modern day. Everything is more affordable and easily accessible at your fingertips. The influence of social media today has made living relatively simple[1]. Social media can be used whenever and wherever it is most convenient for a person. One essential aspect of modern living is social media. Social media keeps you connected and keeps every generation informed about events across the globe. The social media influences people. People can communicate on a variety of social media platforms, but Twitter and Facebook are the most well-known across generations. People begin to think about elections whenever any news or articles relating to a particular individual or party are uploaded. In the form of comments on social media, people express their opinions or ideas regarding the elections and the political parties. Some people support it, while others are opposed to it. With the aforementioned scenario, we're going to put the method from the tweets via social media into practise and try to forecast the results of the election.

Keywords: daily newspaper, social media, information, accessibility, influence, communication, Twitter, Facebook,elections, opinions, forecasting.

I. INTRODUCTION

In a person's life, social impact is crucial. When someone responds on a few social tweets, this has a social impact. If that person responds to it, whether positively or negatively, that could change the situation [1]. Social media links people from all over the world in a matter of seconds. In this case, we are attempting to determine the decision result using information from Facebook or Twitter. When someone responds to a tweet, it is clear whether they are in favour of the idea or against it. The Indian race expectation is the main focus of this paper. Consider any Indian political party as an example, along with the many clients that include dynamic clients and dormant users [1].whenever there is any party-related news on social media, people start commenting on it. These reactions could be neutral, hostile, or pleasant. By using the testing approach, we are obtaining many details and aspects. What social media actually means is that it makes it easier for people to stay informed about events across the globe by disseminating both true and occasionally false news that can have an impact on people's emotions [2]. The issue that will make you think is politics. People eagerly await decisions because they want to know who will win or who will be in charge of running the show. Decisions are the most anticipated moment for the public. This study will probably predict the outcomes of the decision using data from Facebook or Twitter. We'll get tweets from Twitter and then preprocess the data using that information.

"Survey on Online E-voting System Using Blockchain Technology"

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ABSTRACT

We present in this paper, An Online E-voting System Using Blockchain Technology. The fundamental right of every country is the freedom to vote. The voting process is recorded, saved, stored and processed digitally in an electronic voting system (e-Voting), which improves the task of administering the vote compared to traditional paper-based methods. Blockchain offers new opportunities to create new types of digital services. Although research on the subject is still in its infancy, it has mainly focused on technical and legal issues rather than exploiting this innovative idea and developing improved digital services. Blockchain-enabled electronic voting (BEV) can reduce voter fraud and increase voter turnout. Qualified voters vote anonymously using a computer or smart phone. BEVs use personal identifiers and tamper-proof encryption keys. The electronic credit service is becoming an important part of the information environment. It can be relied upon to build more complex systems, especially e-voting systems, to reliably perform basic services such as e-signatures and e-authentication.

Keywords: *Ethereum, blockchain, transactions, voters, online voting systems and smart contracts.*

1. INTRODUCTION

Voting is essential in any democracy. Voting and choosing representatives is the right of every citizen. To protect this right of citizens, the holding of fair elections is a basic need of any country. In a democracy, every vote counts. But many citizens will not vote on election day. Because they may be out of town or the electoral center is too far away. Some citizens don't go because the election results were unfair and they feel their votes don't count. In the current voting system, voting is either done on electronic voting machines or you write your opinion on paper. Replacing the current voting system is necessary to end voter fraud and make the voting and counting process more transparent. In addition, we need a system that provides more security for the voting process. A system that allows us to vote from anywhere in the world. Most of us prefer our online lives. We are more dependent on social media and spend most of our time on social media. We conduct most of our business online. So why can't we vote and choose our representatives with just a few taps on the screen? Why can't there be a system where we can vote online from anywhere? Many governments and organizations use online voting systems to increase accessibility and the number of voters in the voting process. Compared to other technologies, blockchain technology provides greater security for data. This is why the use of blockchain technology in electronic voting systems can provide greater security, transparency and scalability. An electronic voting system using blockchain can solve all the problems of traditional voting systems. Blockchain uses a peer-to-peer network system. Blockchain is a chain of blocks that contains all user information through distributed ledger technology. Blockchain offers several properties due to its distributed ledger technology. Blockchain is a decentralized computing and information sharing platform, which allows multiple domains of authority to distrust each other, but cooperate and co-operate with each other in a certain decision-making process. The blockchain only uses add and add strategies. We cannot delete existing data in the blockchain. Compared to other technologies, blockchain technology provides greater security for data. The use of blockchain technology in electronic voting systems provides greater security, transparency and scalability.

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FLIGHT ACCIDENT SEVERITY PREDICTION

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ABSTRACT - Nowadays transport of airways has been playing a key role in every industry airline and passengers safety is the first concern we should take care of, Various Safety checks are done continuously 24/7 manually, and every safety measure and precaution are been taken care of by the airline team but still some case accidents due to various reasons like pilot error, air traffic controller error, design and manufacturer defects, maintenance failures, sabotage, or inclement weather etc. The prediction of flight accident severity is crucial for enhancing aviation safety and preventing future accidents. In this research paper, we propose a machine learning-based approach for predicting the severity of flight accidents. Our proposed approach involves the use of feature engineering techniques to extract useful information from the accident dataset, followed by the application of various machine learning algorithms to predict the accident severity. We use a publicly available dataset of flight accidents to evaluate the performance of our proposed approach

Key Words: Error Correction, Safety Management, Flight Training Data, Random Forest, Airplane Crash, SVM, python programming

1. INTRODUCTION

Aviation provides a rapid network across the world making it a crucial mode of transportation. It fosters economic growth and national-international trade and tourism, creates employment opportunities and acts as a boon in situations of calamities. Since the first flight in 1903, the Airport Industry has undergone substantial changes improving the overall flight experience, and safety quotient and expanding the network to connect all countries. While air transportation is considered to be the safest mode, the survival rate in an aircraft accident is very low as the results of the crash may be catastrophic. Hence it is important to consider all parameters playing a role in the operation of aircraft. Common causes of accidents include human error (pilot/ air traffic controller/ dispatcher), mechanical failure, bad weather etc. Aircraft accidents can have catastrophic consequences, resulting in significant loss of life and property damage. It is crucial to predict the severity of these accidents in order to reduce the risk of fatalities and injuries, and to prevent damage to aircraft. Machine learning techniques have shown great potential in predicting the severity of aircraft accidents using historical data. This paper focuses on using machine learning algorithms to predict the crash severity. However, the performance of these techniques depends on the quality and relevance of the features used in the analysis. Crash human loss. The paper explores algorithms such as Support Vector Machine, Random Forest, Gradient Boosting Classifier, K Nearest Neighbors Classifier, Logistic Regression and an Artificial Neural Network, compares the results and justifies them

2. LITERATURE SURVEY

1. A Machine Learning Approach to Predicting Aircraft Accident Severity by T. W. Ford et al. (2019): This paper proposes a machine learning model to predict the severity of aircraft accidents using data on accident location, time, weather, and other factors.

2. Analysis of aviation accident data using machine learning by Y. Chen and H. Liu (2017): This study applies machine learning algorithms to aviation accident data to identify patterns and predict future accidents.

3. Predicting the severity of aviation accidents using data mining techniques by M. Hosseinnezhad et al. (2016): This paper explores the use of data mining techniques to predict the severity of aviation accidents using historical data.

4. Prediction of Aviation Accident Severity Using Machine Learning Algorithms by S. S. Singh and S. K. Jena (2018): This study applies machine learning algorithms to aviation accident data to predict the severity of accidents.

5. Predicting Aircraft Accident Severity using Artificial Neural Networks by P. V. Jadhav and P. R. Nemade (2015): This paper proposes the use of artificial neural networks to predict the severity of aircraft accidents.

6. Analysis of Aviation Accident Causality and Severity by H. Li and H. Li (2019): This study uses statistical analysis to identify the causes of aviation accidents and their impact on accident severity.

7. A Comparative Study of Predicting Aircraft Accident Severity by C. Lin et al. (2020): This study compares the performance of different machine learning algorithms for predicting the severity of aircraft accidents.

8. Predicting Aviation Accident Severity Using Logistic

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"RESEARCH ON HR ANALYTICS USING POWER BI AND MACHINE LEARNING"

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ABSTRACT

A subject of vast knowledge in which predictive and descriptive analytics is of its main components which includes employee work performance analysis, promotion analysis and attrition rate analysis as results. The main purpose of Human Resource management is to measure the achievement of employees and their role in the work services or business which acts as benefits to the company and to analyze employee period in the company. The main motto of Human Resource analytics is to identify skilled individuals strive extremely for of who the return investment for the organization by considering several factors which a better understanding of the for help predictive analysis. Employee is individual churn by considered a major problem for many organizations. It is one of the crucial problems to identify because it affects sustainability and also the organization" s planning and enhancing work culture harmony. Therefore, the Human Resource department in every organization is striving hard paying attention identify underlying and the to improvements. By identifying this demand, the study aims to increase the ability to identify employee churn using POWER BI with the help of real-time data insights in dashboards for HR management.HR report is an analytical method used to display human resources -related status , insights , and metrics with the primary purpose of improving workforce performance , recruiting procedures and other relevant HR processes with the help of HR dashboards.

Keywords: *Predictive analysis, employee churn ,power BI, random forest ,logistic regression, HR management*

Introduction

HR report is an analytical method used to display human resources-related stats, insights, and metrics with the primary purpose of improving workforce performance, recruiting procedures and other relevant HR processes with the help of HR dashboards Human Resource (HR) analytics is an integrated approach to improvise the decision making capability to achieve organizational goals. High-end predictive modelling is used in HR analytics where the organization faces the scenarios to forecast the consequences of the organization or enterprise policies [4]. Most of the organizations lack a widespread look towards the workforce and require human resources predictive, analysis to perform workforce development and is necessary for the organization to develop various aspects of the company such as IT and financial skills for better ROI(Return On Investment). Predictive analytics is much of forecasting the organization's goals based on the workforce rather than a descriptive analysis .

An HR dashboard is a business intelligence tool that allows Human Resource teams to track, analyze and report on HR KPIs. Modern, interactive dashboards leverage an HR analytics platform which makes it easy to combine data from all systems and to deeply explore this data directly within the dashboard. This way, HR teams can quickly find insights that will improve recruiting, optimize workplace management and enhance employee performance.

Employee performance dashboards help HR teams and business managers understand the effectiveness, satisfaction and goal progress of their workforce. To analyze compensation vs. performance this project shows the number of active employees by rating level and salary by employee rating.

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RESEARCH PAPER ON DRIVER SLEEPINESS DETECTION SYSTEM

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ABSTRACT

The occurrence of accidents during road trips due to driver drowsiness has become a pressing issue, leading to an urgent need to develop effective methods for recognizing and detecting sleepiness. This research aims to contribute to the efforts in reducing traffic accidents caused by driver fatigue and carelessness. The study focuses on collecting secondary data from previous research on drowsiness detection classifications and various methods employed to identify sleepiness or negligent driving. The objective is to create an interface that automatically detects driver drowsiness and promptly responds in the event of an accident. This system utilizes webcam images of the driver to enhance driving safety. By collecting live images from the webcam stream and applying machine learning algorithms, the system can accurately determine whether the driver is drowsy or alert. When drowsiness is detected, the system activates a buzzer alarm and gradually intensifies the sound. If the driver fails to respond, the system sends text messages and emails to their family members, informing them about the situation.

Keywords: Sleep Detection, Face Detection, Driver monitoring system Drowsiness.

I. INTRODUCTION

Driver fatigue poses a significant risk to road safety globally, leading to a significant number of accidents and fatalities every year. The negative consequences of driver drowsiness extend beyond the individuals involved, affecting passengers, pedestrians, and other motorists on the road. As a result, researchers have been actively investigating various methods to detect driver drowsiness and mitigate its potential hazards.

The primary objective of this study is to develop a comprehensive approach to driver sleep detection that incorporates various physiological, behavioral, and environmental factors. By combining these different modalities, we aim to improve the accuracy and reliability of drowsiness detection systems, which will enable timely interventions to prevent accidents caused by fatigue-related impairments.

The research questions driving this investigation are as follows:

- How can physiological markers such as heart rate variability, electroencephalography (EEG), and eye movement patterns be effectively utilized to detect driver drowsiness?
- What behavioral indicators such as steering wheel movements, lane deviations, and facial expressions can be incorporated into the detection system to enhance accuracy?
- How can environmental factors, including lighting conditions and road characteristics, be integrated to

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Fraud Detection in Credit Card Automated System using ML with AWS SageMaker

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Abstract: ***The article discusses the need for the widespread adoption of payment systems, which has been driven by advances in technology. However, the issue of fraud remains a major concern for financial institutions, as there is no one-size-fits-all approach to detecting and preventing fraudulent transactions. Machine learning has been identified as a potential solution to this problem, but it requires the development of a reliable automated system capable of handling large volumes of data in real-time. In the article, the author details the structure and setup of an automated fraud detection system for payment systems that relies on a web service hosted on the cloud. The deployment of this system is justified by utilizing Amazon Web Services as the platform, which includes Amazon Fraud Detector and Amazon A2I task type to authenticate and validate forecasts that are deemed high-risk. One instance of developing a system for detecting anomalies on Amazon DynamoDB streams is presented by utilizing AWS SageMaker, AWS Glue, and AWS Lambda. The software product aims to prevent and detect fraud in payment systems, with a rapid detection time and integration with various business institutions. The article also highlights the importance of developing a specific methodology for implementing the software product for fraud detection in payment systems.***
Keywords: Fraud detection, anomaly detection, machine learning, automated system, cloud computing, big data, data analysis

I. INTRODUCTION

The digital revolution of society has led to customers conducting more transactions autonomously. There is less need to visit physical financial institutions as payment systems and services become more prevalent. The rise of modern payment systems is being driven by the growing prevalence of online transactions and their incorporation into a variety of industries, such as financial institutions, online stores, logistics firms, insurance providers, and trading platforms. These payment systems offer a range of benefits, such as convenience, speed, simplicity, transparency, and greater control over financial transactions. However, the risks associated with such transactions are also increasing, specifically the risk of fraud. Consumers and businesses are increasingly faced with fraudulent transactions, resulting in the loss of ordered goods or services and depletion of funds from accounts. Financial losses and a decline in customer loyalty are the consequences for businesses, potentially leading to a loss of customers.

II. LITERATURE REVIEW

The utilization of data [1] has exposed various forms of fraudulent activities in the banking sector, such as social engineering, transfers through online banking, card-to-card transfers, mobile banking access interception, counterfeit mobile banking, embezzlement through SMS-banking, and purchases made via Apple Pay and Google Pay. Payment card fraud has been identified as the primary type of fraud in the banking industry. The study proposes different methods for combating fraud and highlights the benefits of modern technologies that employ fraud detection models and methods. The key objective of the research [2-3], [4-5] is to categorize models of fraudulent transactions using various techniques. The suggested course of action is to employ this approach in the detection of fraud instances that have already been observed. The research [6] suggests that transactions can be flagged as fraudulent if they differ from the usual behavior of the customer, based on the assumption that attackers' behavior is vastly different from that of account owners. The approach to risk management of fraud with payment systems, which involves a combination of the presented approaches, defined in the works [7-8]. Given the above, it is advisable to first develop and define a model of user behavior, and then detect fraud. Various methods and algorithms can be used to solve this problem. It is worth noting the study presented in [9] – the lack of an effective and accurate algorithm for fraud, which would be the standard for all financial transactions. Each technique has its advantages and disadvantages. In addition, approaches to fraud are dynamic and require constant revision of forecasts, and this is due to the fact that each business in which possible fraudulent schemes are unique and must rely on its own corporate system. An example of the application of unified models of methods under the conditions of specific institutions is presented in the paper [10].

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Child Immunization System : A Survey

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ABSTRACT

The need for vaccinations in children has been established, and it is one of the duties of parents to administer the necessary vaccinations to their children on time. The purpose of the article is to make it simpler for parents to remember to use an online vaccination planner website. A single analysis cannot forecast more than one disease using a same system. Following the observation and survey, there is not much of a problem, and it may be resolved by creating a schedule for child immunizations and a parental reminder.

INTRODUCTION

The author is putting out a method for forecasting certain ailments. The mother cannot determine the toddler's immunization schedule at each stage, the toddler's track record of growth cannot be known at any moment if the check-up card is destroyed or lost, and the toddler's medical history is impossible to know and difficult to trace. It is required to establish an information system care service that is web-based as an alternative to resolving current issues. In this research, the author presents a general system to deal with healthcare issues, which uses a single platform to store and retrieve comprehensive kid medical history data. It contains information on the child's mandatory vaccination regimen as well as past medical history records. To remind parents to provide their child with health protection, reminders are also given about the importance of timely vaccines. Every year, immunisation prevents 2 to 3 million fatalities from diphtheria, tetanus, pertussis, and measles. However, if vaccination rates were increased globally, an additional 1.5 million deaths 5 may be avoided.

LITERATURE SURVEY

The author of this paper interpreted on how one such program, called "e-Vaccine," was created, how it works, and how to utilize it to speed up the vaccination process and help parents and doctors better maintain. their children's immunization treatment plans. It uses Aadhaar Verification to authenticate users, enables users to schedule vaccination appointments at hospitals in their states, and sends timely updates and reminders for immunizations that are approaching. Users can browse their profiles, update the vaccination histories of their children, and add new children to their records using the program after logging in using OTP verification [1].

Author Interpreted that Vaccination for kids has been a necessity for them and it is one of the responsibilities of parents to completely give all the vaccines for their appropriately on the right date as well. Sometimes due to the busy schedules of the parents they tend to forget about their kids vaccinations. It would be easier if the parents are having a vaccination planner which can be carried

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Blockchain Based Health Care System: A Comprehensive

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ABSTRACT

Governments heavily rely on collected data to analyze the health needs and requirements of their citizens. However, this data is often scattered and collected by different agencies with varying goals and business models. This creates a burden for governments in planning adequate health bills that ensure the wellbeing of their citizens. Additionally, the lack of synchronization and real-time access to this data exacerbates the problem further. Therefore, it is crucial for governments to have a system that guarantees the integrity, accessibility, correctness, and security of medical data in a highly synchronized environment. To address this issue, we propose Smart-Health (SHealth), a blockchain-based health management system. SHealth is a private, multi-layered blockchain with a multi-tiered addressing scheme that defines the privileges and permissions of entities in the system. By using blockchain technology, SHealth ensures security, reliability, availability, resistance against tampering and malicious attacks, seamless integration, and easy data management. SHealth offers complete autonomy to its users through a user-friendly graphical interface. It utilizes smart contracts to initiate various requests and inquiries pertaining to patients, such as appointments, medical tests, medications, medical procedures, or history. The system is simple, robust, efficient, secured, and completely automated. All stakeholders in the system can access the health-related data stored in a distributed database without compromising its authenticity. SHealth covers all possible scenarios in health systems, and some of these scenarios are explained in this work. In summary, SHealth provides a solution to the challenges faced by governments in managing and analyzing scattered health data. Its use of blockchain technology ensures data integrity and accessibility while providing complete autonomy to its users.

INTRODUCTION

In order to effectively allocate resources and provide adequate healthcare services, governments need access to comprehensive and accurate data on the health needs and requirements of their citizens. However, in many countries, such data is scattered among various entities such as hospitals and medical centre is, making it difficult for governments to gain a complete understanding of the health situation. This can lead to unrealistic projections when preparing healthcare budgets and expenditures, which can have negative impacts on the level of care provided to citizens.

Furthermore, without a unified national database, governments may struggle to analyze the spread and prevalence of certain diseases, as well as their impact on specific demographics or geographic regions. The lack of real-time access and synchronization of health records also poses challenges to healthcare management.

To address these issues, many countries have implemented national healthcare databases, either managed by independent health insurance providers or the government's health provider. These databases can provide a centralized location for comprehensive health records, which can be used to inform policy decisions and optimize healthcare services.

Overall, establishing a national healthcare database is crucial for governments to gain a comprehensive

Handwritten Text Recognition Using CNN

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Abstract

Variety of important things are there that we all have in common. However, several distinctions mark the identity of each individual. Apart from DNA, fingerprints, and other biometrics, another distinctive feature which lately, fresh assessments on handwriting evaluation have released is handwriting. Although duplication of handwriting is debatable and fabrication is a big problem, several factors like pen holding method, pressure applied, type of strokes, etc, give uniqueness to handwritten textThis research paper discusses the use of Convolutional Neural Networks (CNN) forHandwritten Text Recognition (HTR) tasks. HTR is the detection of characters from images. HTRis a complex task due to the variability and diversity of handwritten characters in the script. CNNs are a type of deep learning algorithm that can automatically learn features from images and are widely used in image recognition tasks. This paper presents a CNN-based approach for HTR that achieves state-of-theatre performance on a benchmark dataset. The proposed approach involves a pre-processing step to normalize and segment the input images, followed by a CNN architecture that consists of several convolutional layers and fully connected layers. The network is trained using a massive character-labelled dataset. The outcomes demonstrate that the suggested method achievesexcellent accuracy in recognizing characters and can be applied to real-world applications such as document digitization and text-to-speech conversion.

Keywords: Handwritten Text Recognition, CNN, Convolutional Neural Networks, Deep Learning, Image Recognition.

I. INTRODUCTION

Handwritten text recognition is a challenging problem in the field of computer vision and machine learning. Document and other source and change them in machine learning shape further processing. The accurate recognition of shaped compound handwritten text is still great challenge. The increasing use of digital technology, the need for automatic DHTR systems has become more important for applications such as document digitization, text-to-speech conversion, and language translation. Convolutional Neural Networks (CNN) have been shown to be effective for image recognition tasks, and recent studies have demonstrated their potential for HTR. In this paper, we propose a CNN-based approach for HTR that achieves state-of-the-art performance on a benchmark dataset. The proposed approach involves a pre- processing step to normalize and segment the input images, followed by a CNN architecture that consists of several convolutional layers and fully connected layers. The network is trained using a large dataset of labelled English characters. We demonstrate the effectiveness of the proposed approach by comparing it with other state-of-the-art methods. The results show that the proposed approach achieves high accuracyin recognizing characters and can be applied to real-world applications such as document digitization and text-to-speech conversion.

II. LITERATURE REVIEW

CNN model has been guaranteed to improve the performance of character detection. proposed a CNN model for character detection and proved to outperform the traditional recognition methods using binary characters. The model achieved better results.[1]

Jacobs et al [2] proposed a recognizer system using CNN for detection on grayscale image. The model outperformed the OCR software on documents with low resolution. The CNN model performed better in the detection of Chinese characters which was mainly due to absence of large public datasets for Chinese characters. In English and Kannada datasets were used for feature extraction such as edge methods, texture representation and shape to evaluate their common parametric values. It was concluded that on blur feature descriptors and shape

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"Machine Learning Based Child Immunization System"

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Abstract

Author present in this paper, a Machine Learning based system to address healthcare issues, where a common platform to store and retrieve complete child medical history information. It contains information about the child's mandatory vaccination schedule as well as previous medical history records. To remind parents to provide their child with health protection, reminders are also given about the importance of timely vaccinations. Parents and doctors can access the child's medical records online at any time and from any location using Web-based technology with the necessary privileges. This work enables both parents and healthcare providers to offer higher-caliber medical care. Finally, the data collection can be further examined to identify disease trends and patterns, opening up new opportunities for engineering and medical research that will improve quality of life. One of the key infrastructure components in creating smart cities, a project recently undertaken by the Indian government, is smart healthcare. This highlights the requirement for creating clever solutions to deliver higher-caliber healthcare services to all populations. As a result of inadequate healthcare, malnutrition, and subpar sanitation—all of which are preventable—India has the highest rate of child mortality in the entire world.

1.Introduction

India is the second most populous country in the world, around a fifth of the world's population. Providing quality healthcare to all is a huge challenge and it is complex. Of the total population, 29.7% represent children under age 15.They represent future generation of the country. Ensuring their healthy growth and development is a primary concern. According to World Health Organization reports 1.5 million children die every [illegible]

emergency, lack of availability of previous medical history records can cause delay in the medical treatment. Also, delay in giving vaccines increases the risk of a seizure and leaves children at risk. for diseases longer. To address these issues, a Machine Learning based system is proposed to store and retrieve the child medical records with mandatory vaccination schedule for each child based on their date of birth and as per the vaccination chart provided by Indian Academy of paediatrics. A web application with access to both parents and doctor are proposed with necessary privileges. Below diagram illustrate that the details of child and infants ages for the vaccinations.

2.Problem

As we all know, nowadays, we are busy with our daily tasks, and parents of multiple children often forget important details like the dates of their children's vaccinations. As we can see, there are no proper vaccination tracking planner applications or systems in India that can be used to remind us on when the next vaccination is supposed to be done for our child. This is the first of three problems that were encountered. Second, current initiatives only save data in databases, which can only be viewed by administrators, and do not yet have online backups that would make it easier for users to retrieve the data. The third issue is that the majority Parents with hectic schedules find it challenging to arrange an appointment with the doctor so that their children may have their vaccinations on time because existing websites and planner applications don't include the information of the paediatrics along with their information. One out of every three kids leaves the immunisation programme and practically all children are only partially protected. Immunisations that are delayed may have negative impacts on youngsters.

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HEALTH CARE PRIVACY APPROACH USING BLOCKCHAIN TECHNOLOGY

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ABSTRACT

A huge amount of data, generated by different applications in computer network, is growing up exponentially based on nonstop operational states. Such applications are generating an avalanche of information that is disruptive for predictable data processing and analytics functionality, which is perfectly handled by the cloud before explosion growth of Big Data. Blockchain technology alleviates the reliance on a centralized authority to certify information integrity and ownership, as well as mediate transactions and exchange of digital assets, while enabling secure and pseudo anonymous transactions along with agreements directly between interacting parties. It possesses key properties, such as immutability, decentralization, and transparency that potentially address pressing issues in healthcare, such as incomplete records at point of care and difficult access to patients' own health information. An efficient and effective healthcare system requires interoperability, which allows software apps and technology platforms to communicate securely and seamlessly, exchange data, and use the exchanged data across health organizations and app vendors. Unfortunately, healthcare today suffers from siloed and fragmented data, delayed communications, and disparate workflow tools caused by the lack of interoperability. Blockchain offers the opportunity to enable access to longitudinal, complete, and tamper-aware medical records that are stored in fragmented systems in a secure and pseudo-anonymous fashion. Fog computing or fog networking, also known as fogging, is pushing the frontiers of computing applications, data, and services away from centralized cloud to the logical stream of the network edge.

I. INTRODUCTION

Technology or the distributed, secure ledger technology has gained much attention in recent years. This paper presents a detailed survey of blockchain technology literature and its applications. The sources of blockchain literature examined for this sur-vey include research papers, books and book chapters, journal papers, specific cryptto currency sites and wikis, conference papers, company 'Point of View's (PoVs), whitepapers published by various organizations implementing and experimenting in Blockchain. Blockchain being a much hyped and experimented technology a lot of literature is found in content hosted on proprietary forums such as company web- sites, web articles, etc. This survey is extensive and covers the various aspects of blockchain including consensus algorithms and their variations as well as currently implemented and possible future applications. This survey will not cover the details of technical aspects of blockchain, however, references that cover these aspects maybe found in bibliography.

II. RELATED WORK

In this section we briefly present some of the recent proposed health management applications and systems that are based on the blockchain technology. A proposal for a blockchain-based medical system for secure sharing, storage and access to medical data is introduced in [26]. The paper presents a lightweight scheme for sharing medical records among doctors from various hospitals while ensuring their security in terms of privacy protection and resistance to data manipulation. The proposed scheme also presents a mechanism to match similar symptoms exhibited by different patients in different locations. The system helps the patients create session keys for their future communication on the disease. A major drawback of this mechanism is that it relies on the delegated proof of stake consensus mechanism in order to maintain the sanity of the ledger. On the

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A Survey on Handwritten Text Recognition.

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ABSTRACT

Handwritten Text Recognition (HTR) is the detection of characters from images. HTR is a complex task due to the variability and diversity of handwritten characters in the script. CNNs are a type of deep learning algorithm that can automatically learn features from images and are widely used in image recognition tasks. This paper presents a CNN-based approach for HTR that achieves state-of-theatre performance on a benchmark dataset. The proposed approach involves a pre-processing step to normalize and segment the input images, followed by a CNN architecture that consists of several convolutional layers and fully connected layers.The network is trained using a massive character labelled dataset. The outcomes demonstrate that the suggested method achieves excellent accuracy in recognizing characters and can be applied to real-world applications such as document digitization and text-to-speech conversion.

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HEART DISEASE PREDICTION USING MACHINE LEARNING TECHNIQUES

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ABSTRACT

Heart plays significant role in living organisms. Diagnosis and prediction of heart related diseases requires more precision, perfection and correctness because a little mistake can cause fatigue problem or death of the person, there are numerous death cases related to heart and their counting is increasing exponentially day by day. To deal with the problem there is essential need of prediction system for awareness about diseases. Machine learning is the branch of Artificial Intelligence(AI), it provides prestigious support in predicting any kind of event which take training from natural events. In this paper, we calculate accuracy of machine learning algorithms for predicting heart disease, for this algorithms are logistic regression , random forest classifier and support vector machine(SVM) by using kaggle dataset for training and testing. For implementation of Python programming Anaconda(jupyter) notebook is best tool, which have many type of library, header file, that make the work more accurate and precise.

Keywords: Supervised; Unsupervised; Reinforced; Logistic Regression; SVM; Random Forest Classifier Python Programming; Jupyter Notebook.

I. INTRODUCTION

Heart is one of the most extensive and vital organ of human body so the care of heart is essential. Most of diseases are related to heart so the prediction about heart diseases is necessary and for this purpose comparative study needed in this field, today most of patient are died because their diseases are recognized at last stage due to lack of accuracy of instrument so there is need to know about the more efficient algorithms for diseases prediction. Machine Learning is one of the efficient technology for the testing, which is based on training and testing. It is the branch of Artificial Intelligence(AI) which is one of broad area of learning where machines emulating human abilities, machine learning is a specific branch of AI. On the other hand machines learning systems are trained to learn how to process and make use of data hence the combination of both technology is also called as Machine Intelligence.

As the definition of machine learning, it learns from the natural phenomenon, natural things so in this project we uses the biological parameter as testing data such as cholesterol, Blood pressure, sex, age, etc. and on the basis of these, comparison is done in the terms of accuracy of algorithms such as in this project we have used three algorithms which are logistic regression, random forest , SVM. In this paper, we calculate the accuracy of three different machine learning approaches and on the basis of calculation we conclude that which one is best among them.

The Heart is an indispensable organ in Human beings. Heart disease is the main reason for the deaths of many people in the world. As per WHO, every year 12 million deaths are caused due to cardiovascular disease. Heart Disease is like a silent killer which results in the death of a person without obvious symptoms. Early identification of disease leads to prevention of disease and which in turn reduces the complications. As we say, prevention is better than cure, preventing heart disease can be able to prevent many premature deaths and reduce the mortality rate. Doctors may not be able to monitor the patient for 24 hours. Although there are lots of instruments in the market, they are not capable of detecting heart disease accurately and some of the instruments are very expensive and would also require expertise in the field. Machine learning is a trending technology, which is a subclass of artificial intelligence. Machine learning allows machines to enhance at tasks with experience. Machine learning enables a system to identify patterns by itself and make predictions.

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Vehicle Detection using Deep Learning

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Abstract - Vehicle detection plays a crucial role in various real-world applications such as traffic monitoring, autonomous driving, and surveillance systems. With the rapid advancements in computer vision and deep learning techniques, the YOLO (You Only Look Once) algorithm has emerged as a popular and efficient solution for real-time object detection. In this paper, we propose a vehicle detection system using YOLOv8, an improved version of the YOLO architecture. The YOLOv8 model combines the strengths of the previous YOLO versions with additional enhancements to achieve higher accuracy and improved detection performance. The system employs a deep convolutional neural network (CNN) architecture trained on a large-scale vehicle dataset. The training data consists of annotated images, where each vehicle is labeled with bounding box coordinates. During the training process, the YOLOv8 model learns to extract informative features from input images and simultaneously predicts bounding boxes and class labels for detected vehicles. The training is performed using backpropagation and optimization algorithms to minimize the detection loss function. Once trained, the YOLOv8 model demonstrates its efficiency by providing real-time vehicle detection on new images or video frames. The system processes the input data, identifies potential vehicle regions, and assigns class probabilities to these regions. In conclusion, the integration of the YOLOv8 model in vehicle detection systems provides a powerful solution for real-time and accurate detection of vehicles.

Key Words: Vehicle dataset, ITS, Vehicle detection, Traffic management

1. INTRODUCTION

Vehicle detection is a fundamental task in computer vision and has numerous applications ranging from traffic surveillance to autonomous driving systems. Over the years, deep learning models have shown remarkable success in object detection, and the You Only Look Once (YOLO) algorithm has emerged as a popular and efficient solution. In this paper, we introduce a vehicle detection system using YOLOv8, an improved version of the YOLO architecture.

The YOLO algorithm revolutionized object detection by introducing a unified framework that performs object recognition and localization in a single pass. Unlike traditional methods that rely on region proposals or sliding windows, YOLO divides the input image into a grid and predicts bounding boxes and class probabilities directly. This unique approach enables real-time performance, making it highly suitable for applications requiring fast and accurate vehicle detection.

Building upon the success of its predecessors, YOLOv8 introduces several advancements to enhance detection accuracy and robustness. It leverages the power of deep convolutional neural networks (CNNs) to learn rich feature representations from images, enabling the model to capture intricate details and spatial relationships crucial for accurate vehicle detection. Additionally, YOLOv8 incorporates anchor boxes of different sizes and aspect ratios to handle variations in vehicle scales and orientations effectively.

One key improvement in YOLOv8 is the use of anchor box clustering. This technique optimizes the default anchor boxes based on the dataset, improving the precision of bounding box predictions. By adjusting the anchor boxes to match the distribution of vehicles in the training data, YOLOv8 ensures better localization accuracy and reduces false detections.

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VEHICLE DETECTION ALGORITHM ANALYSIS: A SURVEY

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Abstract - Deep Learning is a rapidly advancing field that has the potential to revolutionize numerous areas of research and industry. One critical task within this domain is vehicle detection, which has practical applications in domains such as traffic management, public safety, and autonomous driving. Intelligent Transportation Systems (ITS) can be used for vehicle detection to count and track vehicles, detect incidents, and collect tolls. This helps improve traffic management, monitor flow and congestion, and better meet the needs of travelers and commuters, making transportation systems safer, more efficient, and effective. The goal of this task is to develop algorithms that can automatically detect and localize vehicles in images or videos by training Deep Learning models on labeled datasets of vehicle examples. Object detection using Deep Learning is a related task that involves identifying and localizing objects in images or videos. This task aims to automatically detect and classify objects within a scene and determine their precise location. Object detection using Deep Learning is beneficial in real-time applications such as surveillance systems, robotics, and self-driving cars, and can result in improved safety, efficiency, and automation across various domains.

Key Words: Computer vision, Intelligent transport system (ITS).Vehicle detection, Traffic management.

1. INTRODUCTION

Vehicles have become an essential part of modern society, with significant impacts on our daily lives and the global economy so that increase of vehicle in world has huge amount. It provide a convenient and efficient means of transportation, enabling people to travel to work, school, and other destinations. They are also essential for transporting goods and materials, supporting trade and commerce. The automotive industry is a significant employer, providing jobs for millions of people worldwide. This includes not only manufacturing and sales but also research and development, maintenance, and repair. As Vehicles are a critical component of transportation infrastructure, requiring the construction and maintenance of roads, highways, bridges, and tunnels. This infrastructure supports economic growth and development, and facilitates movement and connectivity between regions and countries. The development of vehicles has driven technological advancements in various fields, including materials science, engineering, and software development. New innovations in electric and autonomous vehicles have the potential to transform transportation and reduce environmental impacts. It is estimated that by 2050 there will be more than 10 billion motor vehicles on the road. While transportation may generate threats such as road accidents, traffic on road. To reduce accident on road the Intelligent Transportation System is developed. Deep Learning is used to mitigate this problem by detecting vehicle. Through Deep Learning advanced warning, detecting hazards in real-time, and optimizing traffic flow,

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Pneumonia and COVID-19 Detection on Chest X-Ray Images using Improved CNN

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Abstract -The extreme lung conditions pneumonia and Covid-19, tend to affect one or both lungs, frequently brought on via viruses, fungus, or bacteria. Primarily based at the x-rays we've, we can be able to identify this lung infection. Chest X-rays dataset is taken from Kaggle which incorporate numerous x-rays photographs distinguished by means of 3 classes "Pneumonia", "Covid-19" and "Normal". Our aim is developing a deep learning model which can detect the lung disorder. In this project we are using a deep learning model Improved CNN with backbone architecture Densenet-121.Within the healthcare area, ailment detection is essential because early identification and specific analysis can appreciably beautify affected person outcomes. But, conventional methods to illness detection can be exertions-in depth, pricey, and liable to mistakes. Deep learning has emerged as a viable solution to these problems. Deep learning algorithm can aid healthcare workers in detecting COVID-19 with minimal processing of chest X-ray images. In this study, 3-class datasets were created which included COVID-19, pneumonia and normal images obtained from open sources. COVID-19 and viral pneumonia CXR images contain similar features which are challenging for the radiologist to interpret. However, the CNN model can easily learn the features in just a few epochs of training and classify the images correctly. The high accuracies obtained suggest that the deep learning models could find something distinctive in the CXR images and that makes the deep networks capable of distinguishing the images correctly. These trained models can effectively reduce the workload of medical practitioners and increase the accuracy and efficiency of COVID-19 diagnosis.

Keywords: Deep Learning, Healthcare, CNN, Densenet121, Covid-19.

1.INTRODUCTION

The novel coronavirus of 2019, or simply known as the COVID-19, affects the respiratory tracts and the lungs leading to severe cases of pneumonia. The usual symptoms include fever, dry hack cough, body ache, and loss of taste or smell. In extreme cases, the patient may experience shortness of breath and multiple organ failure and may lead to fatality.

While the world pharmaceutical companies are trying to develop vaccination to prevent the spread of this pandemic, the current medical practice to control the spread of COVID-19 is focused on early detection and isolation of the patient. The current gold standard for COVID-19 detection is the real-time reverse transcription-polymerase chain reaction (RT-PCR), where the short sequences of DNA or RNA are reproduced or amplified and analysed.

There are two types of transfer learning in the context of deep learning, which are feature extraction and fine-tuning. In the feature extraction technique, a pretrained model on some standard dataset such as ImageNet is used, but the top layer, which is used for classification purpose, will be removed. Then on top of the pretrained model, it trains a new classifier to perform classification. The pretrained model without the top classifier is treated as an arbitrary feature extractor in order to extract useful features from the new dataset. In the second approach which is fine-tuning, the pretrained model weights are treated as the initial values for the new training, and they are updated and adjusted in the training process. In this case, the weights are fine-tuned from generic feature.

In view of the above defined objectives, the key contributions of this research work can now be summarized as follows.

- Review of the most recent work related to the COVID-19 AI-based detection techniques using patient's chest X-ray images.
- Description of the proposed multiclass classification model to classify dataset instances considering the following four image categories: (1) COVID-19 positive instances, (2) Normal instances, and (4) Viral Pneumonia instances.
- Parameter optimization of various Deep Learning models using transfer learning techniques leading to high accuracy classification performance results.

PRINCIPAL

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Object detection analysis based on Machine Learning Algorithms

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Abstract - The branch of artificial intelligence known as computer vision focuses on developing and utilizing digital systems to process, examine, and interpret visual data. Computer vision aims to make it possible for computing equipment to accurately recognise an object's digital image and perform the necessary action.The field of transportation and artificial intelligence includes vehicle discovery, which is pivotal. Intelligent transport system (ITS) is a fashion used to produce an effective road transportation system. The Automated Driving System which has made significant advancements in recent times, heavily relies on vehicle identification in its armature. The fashion of detecting vehicles on the road is used for objects similar as vehicle shadowing, counts, and average speed of each vehicle, business analysis, and vehicle categorization and can be applied in a variety of settings. A wide, active, and grueling field of computer vision is real- time object discovery. This recognizes semantic objects of a particular class in digital prints and pictures. For face recognition, vehicle recognition, rambler counting, web image analysis, security systems, and tone- driving motorcars, object discovery is constantly employed.

Key Words: Vehicle dataset, ITS, Vehicle detection, Highway management

1. INTRODUCTION

With the continuous increase in the number of vehicles on the road, traffic accidents occur frequently and traffic safety problems are becoming more serious. In order to fundamentally alleviate road traffic pressure and reduce the number of traffic accidents, the intelligent transportation system (ITS) has come into existence. Vehicle tracking is the most critical part of the intelligent transportation system, which provides great support to solve traffic problems. Various important road traffic information can be obtained through the vehicle tracking process, such as vehicle location, vehicle type, vehicle distance, etc., which can provide a basis for the evaluation of vehicle driving and auxiliary connectivity in urban road scenarios. It is estimated that by 2030 there will be 2 billion motor vehicles on the road. Such a large number of vehicles has raised concerns about the safety of highways and streets. Therefore, intelligent control systems and integrated traffic management will be the solution to deal with the increasing number of vehicles. Therefore, for many years, research on vision-based intelligent transport systems (ITS), traffic planning and traffic engineering applications has been studied to extract useful and accurate traffic information for traffic image analysis and traffic flow control, such as vehicle counting, vehicle trajectory, vehicle tracking, traffic flow, vehicle classification, traffic density, speed, lane change, traffic recognition license plates, etc.

2. LITERATURE REVIEW

Sr. No.	Title	Algorithm	Year	Strength	Limitations
1	Potato Crop Stress Identification in Aerial Images using Deep Learning based Object Detection[1]	Retina-UNet-Ag	2021	Analyzing aerial images of a potato crop using deep neural networks. A Solo UAV and a Sequoia camera used for collecting aerial images of the field. LabelImg software is used to manually annotate the regions containing healthy and	Expand the dataset with newly collected images. Future goal is to include classes of different stressors, and to train the model to not only identify the stressed regions,

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Medicine Identification Application for Visually Impaired People Using Images in Machine Learning

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ABSTRACT—Mobile devices have become one of the most widely used consumer products as a result of the development of new technology. Modern life is very dependent on mobile phones. Many of us have a constant need to call or send messages. For physically challenged and blind persons, the issue is more visible, but it also affects many others, such as when driving or using a smartphone in direct sunlight. Due to subpar prescriptions, bad design, inadequate user support, and impracticality, the majority of mobile pharmaceutical apps created in Thailand for visually impaired persons fall short of the needed standard; as a result, visually impaired individuals are unable to utilise them. The restricted usage of this technology in basic healthcare services serves as the driving force behind this project, which aims to make it possible for persons with disabilities to obtain useful digital health information. When non-visual engagement is necessary, sighted users frequently find them to be inescapable. Android app "Be My Eyes" enables voice commands. The visually impaired are the target audience for the application. Your reference to the Android app "Be My Eyes" is a great illustration of how technology can be used to improve the accessibility of digital health information and other services for people who are blind or visually impaired. The software addresses the difficulties that visually impaired users encounter when using mobile devices and accessing information by incorporating voice commands and non-visual interaction.

Keywords – mobile device, Android app, visually impaired persons, digital health, healthcare services,

1 .INTRODUCTION

The application of technology innovation in healthcare has had a major impact on the quality of human life. Smart technology, particularly in the form of mobile applications, provides consumers with a number of advantages, such as cutting down on the length and expense of treatments and making it easier for them to look up health-related information. The Thai government has implemented a policy mandating the use of smart technology in all facets of Thai life, including healthcare, to support the requirements of those with disabilities and lower social inequality. Smart apps can be extremely useful for people who are blind or visually challenged, as they can be made more inclusive and give visually impaired people autonomous access to healthcare information and services. This reduces social inequity, increases their general quality of life, and fills the gap between visually impaired people and healthcare services.

Smart technology integration into healthcare services is a strategy adopted by the Thai government as part of its commitment to improving accessibility and quality of care for all members of society, including those with disabilities. It is important to ensure that these intelligent apps are created using user-centric design

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Detection and Analysis of Sitting Posture in Real Time Based on Keras Framework

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Abstract - Sustaining proper sitting posture is crucial in the contemporary era of sedentary lifestyles to prevent musculoskeletal problems and promote general well-being. Using the Keras framework, this study proposes a tailored method for the instant identification and evaluation of sitting positions. The suggested approach uses a pre-trained DenseNet201 model with frozen layers and custom layers on top to train a specialized model for identifying sitting postures. The method accurately categorizes sitting postures as good, bad, or undefined by using a wide dataset of sitting posture photos and transfer learning. The system's ability to analyze and monitor seated postures in real time is improved by the integration of YOLOv3 for person detection and MediaPipe Holistic for pose estimation. The system provides immediate visual feedback, using color-coded indicators (green for good, red for bad, and blue for undefined postures), to assist users in self-assessing and correcting their sitting postures. Furthermore, the system incorporates notification alerts to prompt users when a bad posture persists, motivating them to make necessary adjustments. Experimental results demonstrate the effectiveness of the system in promoting healthy postural habits and reducing the risk of musculoskeletal issues associated with improper sitting posture. Future work involves exploring posture analysis techniques and expanding the system's capabilities for a comprehensive analysis of sitting postures. This innovative approach addresses the growing concern of sedentary behavior by providing real-time posture monitoring and feedback, contributing to long-term postural health and well-being.

Key Words: DenseNet201, YOLOv3, MediaPipe, Real-Time, Notification alert, Health.

I. INTRODUCTION

The modern lifestyle has made prolonged sitting increasingly prevalent, which can lead to a number of musculoskeletal and health issues. In addition to bringing about pain and suffering, a bad sitting position can also lower productivity. This problem needs to be resolved in order to promote better workplaces and prevent long-term health issues. Due to advancements in technology, particularly in the fields of machine learning and deep learning, computer-based solutions are now a practical solution to the problem of detecting and analyzing sitting positions. The demand for sitting posture detection and analysis has arisen as a result of an increase in sedentary lifestyles and desk employment, raising awareness of the harmful effects of prolonged sitting. Employee health and safety risks include excessive laptop use while sitting incorrectly, the use of incorrect workstation heights, and a lack of suitable desk chairs. Spinal dysfunction, headaches, neck pain, back pain, and even back discomfort may result from this. The number of people who have back issues rises over time but never falls. Furthermore, given that these ailments affect 20% of the population. As a result, there is an increasing need for automated systems that can accurately identify sitting situations and provide objective analysis and feedback. This report emphasizes the significance of treating issues linked to sitting posture and provides an innovative approach to tackle this problem. The suggested method makes use of the Keras framework, a potent deep learning technology, to detect and analyze sitting posture in real-time. The technology intends to give users precise and quick feedback on their sitting postures by utilizing cutting-edge techniques like transfer learning, object identification, and pose estimation. This essay lays the groundwork for a revolutionary method of real-time seated posture analysis while highlighting the value of proactive posture correction and personalized feedback. To give readers a thorough knowledge of the proposed system's effectiveness and possible influence on postural health, the next sections of the study will examine review work, system architecture, methodology, experimental findings, conclusions, and future work.

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Third – Eye Aid for Blind

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Abstract -

People who are visually impaired face numerous challenges in their daily lives. They frequently rely on the assistance of others. Several technologies exist to assist the visually impaired. People with disabilities have been developed. Computer Vision-based solutions are emerging as one of the most promising possibilities for assisting the blind due to its cost and accessibility. As a result, an efficient technique, such as a machine learning algorithm, is offered as a solution for such persons. The essential data input is gathered via an Image Classification technique in order to access machine learning techniques. The suggested technology captures images using a camera and then converts them into auditory signals to assist blind people. The Raspberry Pi 3B+ is used to build artificial vision in Python.

Keyword- Blind assistant, Image to audio conversion, Machine Learning, YOLO V3, Python.

INTRODUCTION

BLINDNESS affects millions of individuals worldwide. Blind persons confront a wide range of challenges, difficulties in doing every day normal works. Even in their own houses, individuals must exert effort to go from one location to another and to seek belongings. According to the World Health Organization (WHO), 253 million people have visual impairment, 36 million of them are blind, and 217 million have moderate to severe vision impairment. Traditional approaches, such as using a cane, assist them in avoiding obstacles, but they do not assist them in identifying and locating objects. As a result, the blind require aid in locating items in an indoor environment.

This study project focuses on how to assist blind people. We use well-known image processing and computer vision technologies for this, which focuses on finding things in computerized images. Object detection can be utilized for a range of applications, including recovery and surveillance. Other important concepts in object detection, such

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ONLINE E-VOTING SYSTEM USING BLOCKCHAIN TECHNOLOGY

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ABSTRACT

Republic in any country must have a transparent voting system that meets the people's requirements to give the power to the right person. Likewise, the being traditional voting systems suffer from major downsides and missing the lack of security and transparency. This survey paper discusses the possible opportunity for applying BC technology in e-voting systems to improve the process of voting by tackling the issues of trustless, privacy, and security. This paper aims to estimate different operations of blockchain as a service to apply distributed electronic voting systems. Some of them have been only a draft paper; others are implemented in the real world. A blockchain-based e-voting application improves security, privacy, and decreases the cost, even more, which can be achieved.

Keywords: Ethereum, Blockchain, Transactions, Voters, Online Voting Systems And Smart Contracts.

I. INTRODUCTION

From the history to the current time, the distrust in the government and interference in countries ' processes by third parties that have the power to control the popular process of voting raise further and further critical issues than ever. People around the world have their right to vote and select the right person to present them, so violating this right and ignore it will be a huge issue. Retaining a fair and transparent election is prestigious for the freedom which utmost people enjoy moment. Voting is a pivotal and serious event in any country. The traditional paper-pin elections have many weaknesses points concerning security, privacy, fraud, integrity, and fairness issues because paper-pin elections are controlled and managed by a centralized authority. . However, moving to the online voting system didn't solve most of the above issues, but it gives the idea to present a new method or technology that at least stops or handles the weaknesses. There are several sweats to handle or alleviate some problems of the traditional leg election process in west Europe for illustration Estonia has had electronic voting since 2005 and in 2007 was the first country in the world to allow online voting. These efforts make the process of elections easy but security and privacy concerns continue. Consequently, it is essential to prevent the problems of both traditional pin elections and the E-voting system using new technology that takes security, privacy, and fraud issues into consideration. New technology comes into play, which can be used to address the below issues. This technology is called Blockchain (BC). The Blockchain was constructed by Satoshi Nakamoto in 2008 to bolster the first cryptocurrency(Bitcoin) the first digital cryptocurrency. Blockchain Technology can be defined as a decentralized, distributed, and immutable ledger that is used to maintain a continuously growing list of records, called blocks. Each block contains a block title and block data. Lately, experimenters and governments are more interested in Blockchain because it's characterized by high seductive features similar as sequestration and high security. Grounded on data operation BC can be classified into three orders public BC, private BC, and mongrel BC. In public BC which is also called a permissionless BC, anyone can join the BC network, meaning that the party can read, write, or share with a public IP. Public BC is decentralized, no bone has control over the network, and the actors are secure in that the data ca n't be changed once validated on the BC, like Bitcoin, Ethereum, and Litecoin. A private BC is a authorization BC where it places restrictions on who can share in the network and in what deals by a single reality. Eventually, the mongrel BC where isn't granted to a single reality, but rather a group of approved individualities. BC technology is being used nearly in all areas, similar as education, the food system, finance, and the voting systems. The use of BC in the voting gives it a sense of significance because of the challenges this sector deals with. Since BC is a decentralized, distributed, and inflexible tally, it gives the way to resolve the issues which the voting process suffers. With this technology, it reduces the cost of systems that making pressure on the frugality for any country as BC provides a good and low- cost structure subcaste, with no control from a third party on it. A

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A REVIEW: DRIVER DROWSINESS DETECTION SYSTEM

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Abstract: Driver drowsiness is a significant factor contributing to road accidents worldwide, leading to pressing need for effective driver drowsiness detection systems. This review paper offers a comprehensive examination of the state-of-the-art in driver drowsiness detection technologies, their underlying principles, and the challenges they face. We present an extensive survey of the various sensing modalities used in these systems, including vision-based, and vehicular data-driven approaches. We also discuss the critical algorithms and machine learning techniques employed for drowsiness detection. The paper highlights the real-world applicability and limitations of existing systems, emphasizing the need for reliable and non-intrusive solutions. Challenges related to the accuracy of detection, adaptability to diverse driving conditions, and the avoidance of false positives are addressed. In conclusion, this review paper not only synthesizes the existing body of knowledge on driver drowsiness detection but also identifies promising directions for future research and development.

Keywords: Open CV, Python , Drowsiness Detection, Eye Closure & Eye Blinking, Yawning, Fatigue

I. INTRODUCTION

Driver Drowsiness and sleep deprivation is one of the major causes for a lot of road accidents. Driver in drowsy state are a danger to road safety and can cause serious injuries sometimes, resulting in death of the victim and also economical loss. Drowsiness means a state where person feels lethargic, has difficulty concentrating and tiredness in eyes of the drivers while he's driving vehicles.

Most of the accidents happen in India due to the lack of concentration of the driver. Driving ability of the driver deteriorates with time owing to drowsiness. To avoid these situations, we developed a system which will detect the drowsiness nature of the driver and will also alert him immediately.

Lot of people drive on the highways all day and all night. This includes bus drivers, truck drivers, taximen and people who are traveling long-distance, they suffer from lack of sleep. Because of sleep deprivation, it becomes very dangerous to drive when feeling fatigued.

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A REVIEW: AN ENHANCED E-HEALTH SYSTEM USING PERMISSIONED BLOCKCHAIN-BASED IDENTITY MANAGEMENT AND USER AUTHENTICATION SCHEME

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Abstract

The health problems of this world's population are universal. Everyone nowadays values protecting their personal health information. No one likes to let people in on their vulnerabilities. Electronic Health Records (EHR) were developed as a solution to this issue. However, several writers have pointed out that there are drawbacks with EHR, including as costs, data loss, security threats, and others. In this study, we will explore how blockchain may replace EHR and other healthcare record keeping methods. Blockchain is a distributed ledger that records and verifies all transactions via the use of hash values and referencing of prior blocks. Since blockchain is becoming more popular in the medical industry. Blockchain ensures the confidentiality, availability, auditability, and manageability of health records conveniently.

Keyword Blockchain, Smart contracts, PHR (Personal Health Records), healthcare, access control.

Introduction

Cloud computing or fog networking, also known as fogging, and is pushing frontiers of computing applications, data, and services away from centralized cloud to the logical stream of the network edge. A blockchain system can be considered as a virtually incorruptible cryptographic database where critical medical information could be recorded. The system is maintained by a network of computers, which is accessible to anyone running the software. Blockchain operates as a pseudo-anonymous system that has still privacy issue since all transactions are exposed to the public, even though it is tamper-proof in the sense of data-integrity. The access control of heterogeneous patients' healthcare records across multiple health institutions and devices needed to be carefully designed. Blockchain itself is not designed as the large-scale storage system. In the context healthcare, a decentralized storage solution would greatly complement the weakness of blockchain in the perspective. Focuses on the applicability of Blockchain technology in healthcare. A network topology inference method has been proposed along with a proof of concept in real network. Blockchain might replace conventional methods of keeping track of valuable information such as contracts, intellectual-property rights, and corporate accountings. A blockchain system can be considered a virtually incorruptible cryptographic database where critical medical information can be recorded. The blockchain network as a decentralized system is more resilient in that there is no single point attack or failure compare to centralized systems. Personal Health Records (PHRs) have played a key role in enabling safer, more efficient, and consumer-driven health-care systems. Personal Health Records (PHRs) are valuable assets to individuals because they enable them to integrate and manage their medical data. A PHR is an electronic application through which patients can manage their health information.

Literature Review

Patients have authority over their medical records thanks to blockchain [1]. Smart contracts based on the Ethereum blockchain allow patients control over their data in a decentralized, immutable, transparent, traceable, trustworthy, and safe way. To securely collect, store, and exchange patients' medical data, the proposed solution uses decentralized storage of Interplanetary File Systems (IPFS) and trusted reputation-based re-encryption oracles. Algorithms are presented together with complete implementation information. We assess the suggested smart contracts based on two key performance indicators: cost and accuracy. We also explore the generalisation elements of our technique and give security analysis. The suggested approach's drawbacks are outlined. On Github, we make the smart contract source code openly accessible.

IPFS [2] provides a blockchain-based secure storage and access solution for electronic medical data. We built an attribute-based encryption scheme for safe storage and efficient exchange of electronic medical records in IPFS storage environment based on the ciphertext policy attribute-based encryption system and IPFS storage environment, paired with blockchain technology. Our method is based on ciphertext policy attribute encryption, which effectively regulates access to electronic medical data while maintaining retrieval efficiency. Meanwhile, we store encrypted electronic medical data in the decentralized Interplanetary File System (IPFS), which not only provides storage platform security but also eliminates the single point of failure concern. Furthermore, we use blockchain technology's non-tampering and traceable characteristics to

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ASD Detection System

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Abstract: ***Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition that presents a wide range of challenges for affected individuals and their families. Early detection and intervention are crucial in improving outcomes for individuals with ASD. This abstract introduces the development of an innovative ASD detection system, which combines advanced technology and machine learning techniques to assist in early diagnosis. The ASD detection system leverages various data sources, including behavioral observations, medical records, and genetic information, to create a comprehensive profile of individuals at risk for ASD. It utilizes sophisticated machine learning algorithms to analyze and interpret this data, aiming to identify subtle patterns and markers associated with ASD. The system's user-friendly interface allows healthcare professionals to input and access data easily, streamlining the diagnostic process.***

Key Terms: Autism Spectrum Disorder, Machine Learning, Convolutional Neural Network (CNN), k-nearest neighbors (KNN), Artificial Intelligence, Support Vector Machine, Multilayer Perceptron

I. INTRODUCTION

Autism Spectrum Disorder occurs in the developmental stages of an individual and is a serious disorder which can impair the ability to interact or communicate with others. Generally caused by genetics or environmental factors, it impacts the nervous system, as a result of which the overall cognitive, social, emotional, and physical health of the individual is affected. There is a wide variance in the range as well as the severity of its symptoms. A few of the common symptoms the individual faces are difficulties in communication, especially in social settings, obsessive interests, and mannerisms, which take a repetitive form. To identify ASD, an extensive examination is required. This also includes an extensive evaluation and a variety of assessments by psychologists for children and various certified professionals. Conventional methods of diagnosing include Autism Diagnostic Interview Revised (ADI-R) and Autism Diagnostic Observation Schedule Revised (ADOS-R). However, these are lengthy and cumbersome, taking up a large amount of time as well as efforts.

A significant portion of the pediatric population suffers from ASD. In most cases, it can usually be identified in its preliminary stages, but the major bottleneck lies in the subjective and tedious nature of existing diagnosis procedures. As a result, there is a waiting time of at least 13 months from the initial suspicion to the actual diagnosis. The diagnosis takes many hours, and the continuously growing demand for appointments is much greater than the peak capacity of the country's pediatric clinics.

II. LITERATURE SURVEY

Autism Spectrum Disorder is a neurological disorder which needs to be detected at an early stage in order to reduce its symptoms. Various development in the field of machine learning is helping more innovations and development in this medical area. Various researchers have utilized various machine learning algorithms in order to detect Autism at an early stage. Some deep learning- based methods such as CNN have also been used to detect autism in kids using image classification of MRI images.

In the work by Raj et al. "Analysis and Detection of Autism Spectrum Disorder Using Machine Learning Techniques" the authors have proposed the use of methods like- CNN, Support Vector Machine (SVM) and Artificial neural network (ANN). In this work, the missing values were handled first. Later, the authors have used CNN based classifier instead of SVM by including all its features attributes. Here, both the SVM and CNN based models showed the same accuracy of prediction of about 98.30 % for ASD Child dataset. They have used Adam optimizer to optimize and handle loss functions.

Another researcher M. S. Mythili et al. have used classification techniques in order to detect Autism. In Neural Network methods, Support Vector Machine and Fuzzy Logic was used to analyze Autism in students. The dataset utilized in this research work consists of various attributes such as Language data, social skill data, Behavior data, etc.

In another work by Omar et al. the authors have proposed effective prediction of autism using various machine learning techniques. Here, the authors have also developed a mobile application for predicting autism in people of any age. In this work, the authors have performed predictions based on Tree-CART classifier. At the beginning, the tree root consists of the whole dataset. Later on, the dataset is split based on feature selection.

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Detection of Emerging Fake News Trends using Machine Learning

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Abstract

The easy access and exponential growth of the information available on social media networks has made it intricate to distinguish between false and true information. Thus, it has become a research challenge to automatically check the information viz a viz its source, content and publisher for categorizing it as false or true

Keyword: Misleading news, Social Media, Fake News, SVM, NLP, Fake News Trend

1 Introduction

The use of social media to disseminate false information has increased significantly during the last few years. Social media is being used by everyone from individuals to corporations, political parties to extremist organizations to spread false information . There has been an increase in false news generated and published by mainstream news networks, and they are leveraging social media to reach the general public in countries where political parties or governments control mainstream news outlets directly or indirectly.

India is a prime example of one of these nations. The spread of false information online is one of the top 10 risks to society, and fake news on social media is a problem. Fake news is any news content that contains untrue, made-up, prejudiced, slanted, or factually wrong information. The issue of fake news on social media first came to light immediately following the 2016 presidential election in the United States. Numerous studies and investigations claimed that bogus news on social media may have influenced the choices of users.

The classification of news items, posts, or blogs as either genuine or fabricated has attracted signif- icant attention from researchers worldwide. Numerous research studies have been conducted to inves- tigate the impact of fake and manipulated news on the public and how people react when exposed to such content. Falsified news or fabricated posts refer to any form of content, whether textual or non- textual, that is intentionally deceptive and created to make readers believe in something false. For in- stance, a recent case involved a news item posted on the social media platform Facebook by an accred- ited journalist from Srinagar, Jammu and Kashmir. The article was titled "Beasts in White Aprons" and highlighted alleged mismanagement and negligence by doctors at a local pediatric hospital in Srinagar.

2 Related work

In the domain of defining "fake news," despite considerable efforts documented in the literature, a univer- sally accepted and widely shared definition remains elusive. Definition specifically apply to fake articles or stories and do not encompass various other forms of misleading information, such as hoaxes, rumors, satire, or click-bait. Furthermore, they associate the intent of deception solely with a dishonest motive to mislead consumers. Consequently, numerous authors have expanded upon these definitions to encompass a broader spectrum of misleading information and intentions behind it.

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Block Chain Based NFT Market Place

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Abstract

It is a new type Marketplace which is handled online way.It get popular starting in 2020.A big entity, celebrities, Businessman will invest in NFT product.Quick development of NFT is good for making a big Marketplace.Because of NFT is new Marketplace so it have a small market value but NFT industry growing increasingly active.Tokens, digital asset, cryptocurrency are the application of NFT.In Crypto industry it have many future scope and high hopes after decentralized Finance.It make link or connection between Digital and real asset in virtual world.The uniqueness of product make easy to find out or identify the ownership of product on blockchain.The value of NFT will increase in future ,more physical asset will be take part To Chain and financial development will become more of NFT Marketplace.

NFT is used to represent Real world art that like paint poster model building of architecture.Their owner can be sell his own product without take part any middle entity.

Keyword: Decentralized Finance, Cryptographic Tokens, NFT

1 Introduction

There is a category of blockchain-based virtual assets known as non-fungible tokens (NFTs). An NFT(non-fungible token) represents ownership of virtually anything, from digital art to music, videos, memes, and virtual real estate. Digital artwork has sold for millions of dollars. NFTs are an especially promising development for artists and creators. Additionally, the value of each NFT is unique, and they are considered non-fungible. It also guarantees ownership of a unique digital asset. From technical perspective point of view, NFTs are non-interchangeable units of data stored on blockchain, making them resistant to tampering, destruction, or replication. NFTs can be verified by the blockchain technology, giving them extrinsic value as well.

NFTs play a major role not only in the digital domain but also in linking physical assets (known as physical asset NFTs) in a digital domain through blockchain. Examples include NFTs for real estate, diamonds, collectibles, gold, and many other assets .

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Fake Product Detection Using Image Processing in Blockchain

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Abstract: There In recent times, the expansion of counterfeit products has become worldwide. There are many counterfeit goods in the latest supply chain. According to the record, counterfeit product affairs have increased in the last few years. It is essential to have a system for customers or clients to check the all details of the product so that client can decide that the product is counterfeit or not. In India actually, there is no such system to identify counterfeit products. So, the solution includes a simple QR code-based identification that can help the end-user or customers to scan and detect the genuineness of the product by using a smartphone. To design and developed a system for implementing system to detect fake products using blockchain technology, in this work system carried out three different modules like Manufacturer, Retailer and Consumers as well. Each transaction has stored into the blockchain which eliminate all network data attacks in P2P environment for product systems

Index Terms **– Fake Product Detection, Image Processing, Java, Blockchain.**

I. INTRODUCTION

Blockchain technology or the distributed, secure ledger technology has gained much attention in recent years. This paper presents a detailed survey of blockchain technology literature and its applications. The sources of blockchain literature examined for this survey include research papers, books and book chapters, journal papers, specific cryptocurrency sites and wikis, conference papers, company 'Point of View's (PoVs), whitepapers published by various organizations implementing and experimenting in Blockchain. Blockchain being a much hyped and experimented technology a lot of literature is found in content hosted on proprietary forums such as company websites, web articles, etc. This survey is extensive and covers the various aspects of blockchain including consensus algorithms and their variations as well as currently implemented and possible future applications.

This survey will not cover the details of technical aspects of blockchain, however, references that coversheet aspects may be found in bibliography.
This survey is extensive and covers the various aspects of blockchain including consensus algorithms and their variations as well as currently implemented and possible future applications.
The Manufacturer generates the QR code using the user's order-entered transfer information, the user then uses a web application to read the QR code. Dynamic QR-code and unique ID generation for each product document in the proposed system. The smart contract system also allows the updates in entire blockchain

II. . LITERATURE SURVEY

1. **Amofa, Sandro, et al. "A Blockchain-based Architecture Framework for Secure Sharing of Personal Health Data." 2018 IEEE 20th International Conference on e-Health Networking, Applications and Services (Healthcom).IEEE, 2018**
Amofa, Sandro, et al. [1]. A block chain supported architectural framework for the secure control of personal data in health information exchange by combining user-generated acceptable use policies with smart contracts. We outline the features of our system, its user-centered focus, and also show experimental results, along with directions to enhance our work. The framework suggests minimal risk to the data by architecture mechanism for controlling the data after sharing.

2. **Zheng, Xiaochen, et al. "Blockchain-based Personal Health Data Sharing System Using Cloud Storage." 2018 IEEE 20th International Conference on e-Health Networking, Applications and Services (Healthcom).IEEE, 2018**
Zheng, Xiaochen, et al. [2] Propose conceptual design for sharing personal continuous dynamic health data using blockchain technology through cloud storage. The main purpose of the proposed system is to enable

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INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

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PLANT DISEASE IDENTIFICATION

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Abstract: As we all know that to keep this mother earth alive, it is necessary to maintain a pollution free environment so as to keep the nature sustained followed by the other living beings which help us indirectly in various aspects like farming, milk, etc. Total 1,00,000 living beings including trees, animals, etc get infected through wide spread of diseases every year out of which some of them survive whereas the remaining ones die. There have been several reports and analysis of the real life data which was stored by capturing various real life events in the form of records, tables, models, images, etc. With the help of technology and devices, it has become quite easy to store and retrieve such large amount of data for various purposes like education, development, etc. The following project analyzes the data of trees and identifies the condition of them using CNN algorithm which is nothing but a deep learning algorithm.

Index Terms - plant disease identification, datasets, cnn working, prototype, advantages, disadvantages, etc.

I. Introduction:

The project 'Plant Disease Identification' is based on Deep Learning which will use Convolutional Neural Network algorithm to detect and identify the diseases amongst healthy, unhealthy and infected plants by analyzing the datasets in the form of images that were captured in laboratory and outdoors. Convolutional Neural Network is an algorithm that analyzes the image based dataset and determines the characteristics, quality and condition of it. This project mainly focuses on the usage of CNN algorithm and deep learning aspects. The data contains the input in the form of image datasets which comprises of various leaves of different plants in healthy, unhealthy and infected conditions. A dataset is a library that contains several classes or blueprints of the data in the form of text or images depending upon the collection type.

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A REVIEW: Combustion Detection System

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Abstract: Convolutional neural networks (CNNs) have yielded state-of-the-art performance in image classification and other computer vision tasks. Their application in fire detection systems will substantially improve detection accuracy, which will eventually minimize fire disasters and reduce the ecological and social ramifications. However, the major concern with CNN-based fire detection systems is their implementation in real-world surveillance networks, due to their high memory and computational requirements for inference. In this paper, we propose an original, energy-friendly, and computationally efficient CNN architecture, inspired by the SqueezeNet architecture for fire detection, localization, and semantic understanding of the scene of the fire. It uses smaller convolutional kernels and contains no dense, fully connected layers, which helps keep the computational requirements to a minimum. Despite its low computational needs, the experimental results demonstrate that our proposed solution achieves accuracies that are comparable to other, more complex models, mainly due to its increased depth. Moreover, this paper shows how a tradeoff can be reached between fire detection accuracy and efficiency, by considering the specific characteristics of the problem of interest and the variety of fire data.
Fire is the main reason due to which environment is suffering through this much loss of forests, animals and many more. To solve this problem, we need to create a strong system for elaboration. In contemporary society, the prevalence of fires poses a significant threat to safety and infrastructure. To address this challenge, we propose the development of a Machine Learning-based Combustion Detecting System tailored for industrial environments

Index Terms **- Fire detection, CNN, Image Classification, Data Collection, Data Preprocessing, Model Training, Image Processing**

I. INTRODUCTION

Fires Be regularly as a result of the advancement of wisdom and mortal dependence on fire. Fire poses a serious trouble to both property safety and mortal life due to its destructive nature and rapid-fire- fire spread. rested on statistical data, the Worldwide, fire- destroyed forestland are responsible for over lower than 1 of the world's total forested area and are Considered among the causes of global warming. 2019 will see Inner fires claimed hundreds of lives in China alone. All of these goods show how serious fire disasters may be and how important fire discovery is Conventional fire discovery ways are generally employed, and substantially dependent on fire detectors, similar temperature detectors or bank seeing, yet these ways might overlook the honey in the distant.

II. LITERATURE SURVEY

This paper aims to propose the analysis concentrated on the felicity of water mist systems for extinguishing machine fires, taking into account the specific characteristics of similar fires. The study also handed an overview of the structural factors of both tone- contained water mist fire extinguishing systems and pump-supplied systems.

Tone- contained water mist system uses the compressed gas in vessel as give power for agent flowing. The system is equipped with a stoner-friendly launch button located near the motorist's position. In the event of a fire inside the machine cabin, the motorist can initiate a fire extinguishing command by simply pressing this button. The control system instantly receives this command and activates the pump, which, in turn, initiates the release of water mist through the designated channels and sprinklers, effectively suppressing the fire. contemporaneously, sound and light admonitions within the cabin spark, waking passengers to void safely and in an orderly manner.[1]

In this paper, we introduce a new fire discovery algorithm that relies on Support Vector Machine (SVM) with its foundation erected upon the creation of both positive and negative fire sample datasets. To address the challenges posed by implicit gaps within the honey area, our algorithm leverages a scene-based

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Border Surveillance System

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ABSTRACT

Border surveillance is the most important task in the field of national defense and security. To maintain peace and to ensure safety of a country's people, the borders need to be kept under 24/7 monitoring. Especially, under current circumstances, when activities like terrorist infiltrations and illegal movement of both living as well as non-living beings have become common, it becomes of utmost importance to strictly protect the border areas against such activities

Keywords: Border surveillance, monitoring, infiltrations

INTRODUCTION

To curb such happenings on the border areas, the least that can be done is to provide constant monitoring. In current scenario, this monitoring takes place manually by the border security forces which are responsible for continuously keeping an eye on the borders. It takes a lot of manpower and assets as the borders are stretched across hundreds of miles and have extreme terrain as well as climatic conditions. Hence, the need of the hour is to design an automated border surveillance system which can perform the surveillance task without requiring any human assistance. It can eliminate the need of deploying humans at hostile conditions at all the times. Moreover, in case if something suspicious is detected by the system, it must be able to take the necessary decisions and hence actions along with issuing alert messages for the human controllers. The central control rooms can be set up at a distance from the border area. Once the human controller is aware of the intrusion, it is upon him to decide the next course of action

MODULE IDENTIFICATION

Scenario 1: The potential intruder (an animal) is on the other side of the border and cannot be detected by the PIR sensors but is in the camera's field of view. Note that potential intruder here could be a human or an animal.

Scenario 2: The potential intruder (Human being with weapon) is close to the border fence and in the proximity of the PIR sensors as well as in the camera's field of view.).

Scenario 3: The intruder (an animal) has crossed the border fence and is still in the proximity of PIR sensors as well as in the camera's field of view.

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MOUSE CURSOR CONTROL USING HAND GESTURE

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Abstract

The technique of establishing a process of interaction between human and computer is evolving since the invention of computer technology Vision-based dynamic gesture recognition is an important means of human-computer interaction. The mouse is an excellent invention in HCI (Human-Computer Interaction) technology. Though wireless or Bluetooth mouse technology is invented still, that technology is not completely device free. This project takes forward the approach of the Human Computer Interaction (HCI) by controlling cursor movement through hand movement using a real-time camera. Virtual mouse acts as a contactless mouse, thus can be more useful and time saving. People with some problem in their hands can use this virtual mouse to control the mouse functions in the computer.

Keyword: Gesture-based interaction, Hand gesture recognition, Cursor control, Depth-sensing technology, Human-computer interaction, Accessibility

1. Introduction:

In the world of computers, using hand gestures to control the mouse cursor offers a fresh and intuitive way of interacting with digital interfaces. This means that instead of relying solely on a physical mouse, users can guide the cursor through natural hand movements. This approach has the potential to enhance accessibility and streamline interaction, making computing more inclusive for a wider range of users.

The system we're exploring, "literature survey" is designed to understand and respond to these hand gestures. By employing specialized technology, it captures and interprets various movements, effectively turning them into precise cursor actions. This could be a significant step toward a more seamless and user-friendly computing experience.

In this study, we will dive into the workings of "literature survey" starting with an overview of the technology behind it. We'll also explain how the system is calibrated to recognize individual users' gestures accurately. Through a series of experiments, we'll assess how well the system performs compared to traditional mouse input methods.

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AI Resume Analyzer Using Natural Language Processing and Data Mining

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Abstract

Imbalance data conversion into structured data is the very tedious task in data mining techniques, various techniques have been already introduced to extract the data from large text and extract the features using various feature extraction techniques, some machine learning algorithms have been already introduced by various researchers for classification and display the results on heterogeneous data. This work suggests a method of eliminating or resuming important information in a curriculum vitae from the semi-structured text format, and rating it according to the preference and requirements of the client. The whole process was divided into three basic sections to achieve the desired goal. The first section consists of segmenting the whole Summary according to the content of each part, the second section consists of extracting data in a standardized form from unstructured data and the final section consists of analyzing structured data using NLP and Machine learning algorithms. The Stanford NLP rule extraction algorithm ha used to extract the various rules from raw data and select some important feature for classification as well as optimization. Experimental analysis shows the effectiveness of proposed system with classification accuracy.

Keywords : Resume parsing, Data Mining, Machine learning, NLP

Introduction

Classification is specially essential in solutions to data processing and machine-learning. Nowadays, many outlets have generated the numerous types of data in row format, as well as its hard to process from existing environments and algorithms. Text classification requires assigning the text to one or more predefined groups using some kind of classification algorithm performed by the content of the document. A Generic classification corpus has been developed and a single assessment system has been introduced to identify English text based on machine learning, which has now made significant progress. Most of the evidence in the real world is contained in relational bases. Data clustering is an essential machine learning process in which a sub-set of candidate labels is allocated to an entity, the main issue with multi-label clustering is the redundant online clustering method and the offline data set for dealing with this issue. We plan to use unstructured data classification to structured conversion systems and maximize the accuracy of the final sub-cluster. Demonstrate two implementations of our method using logistic regressions and improved gradient trees, along with a simple procedure for Expectation Maximization preparation. We also get an efficient prediction approach dependent on dynamics programming.

Literature Survey

According to [1] a recruiting case study as a basis for a statistical evaluation of several methods for calculating similarity scores. To this end, we suggest using a computer-aided resume evaluator on a group of resumes, then has professionals evaluate the same set of resumes, and finally look for a connection between the two sets of results. Finding the right computer-aided resume evaluator for digital human resources requires a consideration of the various similarity score calculation methodologies now available for processing resumes.

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CRYPTOSHIELD FIR SYSTEM USING BLOCKCHAIN

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Abstract: India's digitalization has led to a shift from traditional manual systems to a centralized online process for registering complaints, but the security of the First Information Report (FIR) system remains a critical concern. This paper proposes a solution that leverages blockchain technology to enhance the security of FIRs, addressing the need for a more secure, traceable, and chronological record-keeping system. The paper analyses existing police case-related procedures, the potential of blockchain technology, and proposed systems, including an integrated police record management system that incorporates blockchain, Machine Learning (ML), and the Internet of Things (IoT). The paper also proposes a mechanism to prevent tampering with e-FIR data, which can be compromised due to local control. The main issues with traditional methods include trustworthiness of e-FIR data, counterfeit registrations, and non-registrations. Corruption, inefficiency, and lack of transparency are the underlying causes of these problems. Implementing a system free from corruption is imperative, and blockchain technology is employed to protect the integrity of e-FIR data and prevent fake registrations, ensuring a more transparent and trustworthy system.

Index Terms - Forensic Investigation, Law Enforcement, Blockchain Technology, Cybersecurity, Cryptographic Techniques, Security Breaches.

I. INTRODUCTION:

Information and communication technologies ICT play a pivotal role in the development of smart cities. ICT investments aim to enhance the quality of life for citizens by fostering economic growth, sustainable governance, efficient resource management, and secure mobility. This progress is realized while maintaining the security and privacy of the city's inhabitants. In a smart city where smart cars, schools, hospitals, utilities, and more are interconnected, the exchange of vast data volumes over the internet necessitates a sophisticated and secure framework for handling Electronic First Information Report e-FIR data within police stations. The significance of accurate record-keeping and information dissemination has become more critical with the expansion of data. Furthermore, the need to safeguard national security calls for trustworthy and time-stamped records to simplify the process. To ensure the security of a smart city, it is essential to comprehend the nuances of classifying offenses. These offenses can be categorized into two groups. Cognizable Offenses These are serious crimes that law enforcement can address without requiring a

SafeLid Vision :Machine Learning for Helmet Detection

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Abstract -

Due to a growth in the number of automobiles, traffic congestion is one of the main issues in large cities. The traffic laws in India are now facing a number of issues that can be resolved in a variety of ways. It is illegal to ride a motorbike without a helmet, and this has led to a rise in accidents and fatalities in India. The current method mostly uses CCTV records to monitor traffic infractions. Whenever a rider is not wearing a helmet, traffic officers must zoom in on the license plate and look into the frame where the infraction is occurring. Clustering and classification are combined to create the helmet detection approach. One crucial yet difficult visual job is helmet detection. It is essential to several applications. It is essential to many applications, including traffic monitoring. The three steps of our suggested strategy are pre-processing, feature extraction, and classification. This study conducts a survey on various technologies and strategies utilized to accomplish the goals. This task has been effectively completed by recent study using features from CNN, R-CNN, LBP, HoG, HaaR, etc. The goal of this research project is to develop a non-helmet rider detection system that can automatically identify and get license plate numbers from moving cars when a driver fails to wear a helmet. Three-level deep learning object detection is the core idea at play. The items found include the license plate at the first level, the helmet at the second level, the individual riding a motorbike at the first level using YOLOv3. The items found include a bike at level one using YOLOv3, a helmet at level two using YOLOv5, and a license plate at level three using YOLOv3. Next, OCR (Optical Character Recognition) is used to obtain the license plate registration number. By employing these methods, a traffic police officer may identify a stolen car from the database and learn more about it. Officers may trace the stolen car using this system by using the location report.

Keywords – CNN,ORC,YOLO3,Machine Learning ,Helmet Detection

1 Introduction -

It is legally required for motorcycle riders in India to wear helmets. Additionally, wearing a helmet is crucial for motorcycle riders' safety. As of right now, it is the responsibility of Traffic Police to make sure that motorcyclists wear helmets. However, the limits of human senses and limited police force make this strategy of monitoring motorcyclists ineffective. Major cities also employ CCTV surveillance-based techniques. However, those are not automated and call for human assistance. There has been an increase in study in the field of road transport due to the growing number of motorbikes and the concern for human safety. This research proposes a system that automates the process of motorcyclist monitoring. When a rider is detected by the system not wearing a helmet, their motorbike number plate is retrieved. Using machine learning, the technology identifies riders who are not wearing helmets and instantly gets their motorbike number plate from CCTV footage at intersections.

One of the key components of a computer vision algorithm is object recognition and tracking. Because of the differences in the sceneries, robust object detection is a difficulty. Tracking the item under occlusion situations presents another significant problem. Therefore, Tensor Flow object detection API is used in this technique for the identification of moving objects. The purpose of traffic regulations is to instill discipline such that the likelihood of fatalities and serious injuries is greatly reduced. Applications utilizing convolution neural networks (CNN) for object identification are overly prevalent. Because of its efficient results, CNN is preferred for image classification, object identification, character recognition, and information retrieval areas. Because of their computational complexity, region-based convolutional neural networks are not appropriate for real-time applications. The primary contributions of the study are the motion deblur of the picture using the Weiner filter to improve output efficiency, the identification of license plates in an image using YOLO, and the character recognition method.

The following justifies the significance of the YOLO algorithm:

• Speed: By predicting objects in real-time, this method increases the speed of detection

• High accuracy: Yolo is a prediction method with low background errors that yields accurate findings

• Learning skills: The algorithm is able to learn object representations and use them for object detection and gives results outstanding learning capabilities.

The object tracking algorithm is then given the discovered item's position. Robust object detection is achieved by using an object tracking method based on YOLO. The suggested method can identify the item under various lighting and occlusion

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Employee Turnover Prediction Using Machine Learning

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ABSTRACT: Employee turnover is a big challenge to the organizations and companies. The employee turnover is the major issue in all organizations and companies. This model is used to predict the intensions of employee turnover during requirement process. The various algorithms are used in this model they are Logistic Regression Method, Random Forest Method, KNN, Extreme Gradient Boosting Method, Decision Tree Algorithm, Support Vector Machine, Naïve Bayes, and Linear Regression. The used data set includes the most essential features, which are considered during the requirement process of employee and may lead to turnover. This feature is salary, age distance from home, marital status, and gender. The KNN based model exhibit better performance in terms of accuracy probability percentage of turnover intentions of the workers. Therefore, the model can be used to aid human resource managers to make precautionary decisions; whether the candidate employee is likely to stay or leave the job, depending on the given relevant information about the candidate employee. To understand the employee needs from his salary. Try to predict his daily essentials his EMI's and other his daily needs, any difficulties is he facing during work. The company must look to the employee needs. The prediction means to know earlier about anything before it gets executed. From its behaviour needs intensions and many other things. In the human resources management, employee turnover is very important for the company operations since the leave of key employees can bring great loss to companies' .Employee turnover indicates the staffs decides to leave the company. Along with the fast development of economic and industries.

KEYWORDS: *Prediction Models, Employee Turnover, Machine Learning Algorithms*

I.INTRODUTION

The human resources department spends a lot of money and efforts on dealing with employee turnover, since the leave of excellent employees will cause huge losses to the company. Therefore, it is important to study and predict the turnover behaviour of employees. In recent years, there has been a massive increase in the competition among companies in sustaining in the business .The profits of the company can be improved by company efficiency. Staff retention is more important than acquisition of new staff. Employee turnover reflects the staffs decide to leave the company. There are a series of data, which records useful information of employee.

Turnover intention, which is an employee's reported will-in gness to leave the organization within a defined period of time, is considered the best predictor of actual employee turnover. n this paper, we model employee turnover intention using a set of traditional and state-of-the-art machine learning(ML) models and a unique cross-national survey collected by Effectory2 , which contains individual-level information. The survey includes sets of questions (called items) organized by themes that link an employee's working environment to her willingness to leave her work. Our objective is to train accurate predictive models, and to extract from the best ones the most important features with a focus on such items and themes. We train three interpretable (k-nearest neighbour, decision trees, and logistic regression) and four black-box (random forests, Boost, Light GBM, and Tab Net) classifiers. Wean laz the main features behind our two best performing models (logistic regression and Light GBM) across multiple folds on the training data for model robustness. We do so by ranking the features using a new procedure those agree gates their model importance across folds.

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Patient Identification and Healthcare System

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Abstract: Personal Health Records Identification is a system that allows an individual to store his/her health related information with doctor. The Personal Health Records Identification can control his/her data stored on the system using the fingerprint. This work aims to propose a privacy-preserved identification scheme to be used in the Personal Health Records Identification system during an emergency situation especially when the victim is unconscious. The fingerprint-based scheme under a Protected Biometric Template concept is applied to identify the victim without compromising the privacy of the victim. The usability and security discussions in the proposed scheme is practical under the current existing communication technology

I. INTRODUCTION

We encounter-centered instead of patient-centered filing systems are being found in many hospitals. Patient files are arranged in the archiving system based on the last encounter date. If a patient can't remember the time of this last encounter, it becomes very hard to retrieve his file. Often weak patient identifiers are in use: the most used identification elements are the names of the patient, the date of birth or an internal department-specific medical record number. Different problems exist with these kinds of identifiers:

1. Many patients do not know their exact date of birth. Even the year of birth can be an approximate.
2. Patient names are not stable: newborns often get a temporary name that changes at a later stage. Some patients do not even know the exact spelling of their name.
3. As explained above, one patient can have many medical record numbers within one and the same health facility.

With an advancement of the communication and healthcare technologies and the rising healthcare cost, a concept of Personal Health records (PHR) has emerged [1]. An individual can store any health related information into his/her PHR system, such as mental health, personnel disease, laboratory test result and health checkup results. With the current communication technology, the PHR owner can access his/her PHR system through his/her mobile phone to store or to retrieve his/her data [2].

During an emergency situation, identifying a PHR owner, who is the victim, is challenging when he/she is unconscious. Correctly identifying the victim identity is critical in order to retrieve the correct PHR for the emergency response unit personnel to provide a proper first-aid treatment. Moreover, the victim who is unconscious usually requires a fast and proper medical treatment. The lacking of the victim identity may increase unnecessary rescue steps.

II. LITERATURE SURVEY

Paper name : Mobile health (m- health) system in the context of iot
Author: S.H. Almotiri, M. A. Khan, and M. A. Alghamdi.
Year:2016

In recent days, various IoT systems were developed for health monitoring systems. Wang et al [6] designed a compatible IoT system for medical devices which was having multiple communication standard. A resource-based data retrieving method (UDA-IoT) was proposed by Xu et al [7] for information-intensive health applications.

Cons: This can only be used in mobile and Hardware cost is also there.

Paper name : Internet of Medical Things
Author: Gulraiz J. Joyia, Rao M. Liaqat, Aftab Farooq, and Saad Rehman Year:2017

Peer-to-Peer (P2P) and IoT technologies were combined in a medical system called as a smart box to keep the patients in control.

Cons: This can only be used in limited area.

Paper name : Smart Healthcare Monitoring using IoT
Author: Shubham Banka, Isha Madan and S.S. Saranya
Year:2015

Kolici et al [8] implemented that compared the experimental results for different scenarios. Web Real-Time Communication (WebRTC) was given by Sundholm et al [9] which focused mostly on the secured transmission of data multiple concurrent streams in an efficient manner.

Cons: Security is added through login and password. This is not so secure and people might forgot at the time medical need.

Paper name : A Survey on Internet of Things: Case Studies, Applications, and Future Directions
Author: K. Bhangal, M. Manohar
Year:2015

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SMARTVOTEX-EMPOWERING ELECTIONS WITH BLOCKCHAIN

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ABSTRACT

The traditional paper ballot system and commonly utilized electronic voting devices can both be substituted with online voting. Besides ensuring transparency in vote casting and safeguarding voter privacy, an electronic voting platform must prioritize security and data integrity. This research advocates for the adoption of a blockchain-based electronic voting system to address certain limitations inherent in current voting methodologies. The paper also explores existing blockchain-based voting frameworks. The current implementation is tailored for small-scale elections conducted in confined settings such as offices and boardrooms. This study introduces a straightforward approach for an equitable electronic voting system that guarantees anonymity, resistance to coercion, accuracy, ease of tallying, eligibility, impartiality, accessibility, integrity, and resilience. It also addresses voter authentication, voter confidentiality, vote verifiability, and public verifiability, all facilitated by blockchain technology.

Keywords: Blockchain, E-Voting, Online Voting.

I. INTRODUCTION

Numerous studies have extensively examined electronic democratic systems, enabling voters to conveniently cast their ballots via mobile phones, computers, or other electronic devices. A blockchain is a ledger of a significantly large number of transactions. Blockchains possess notable attributes, including anonymity, permanence, decentralization, security, and privacy. Blockchain, combined with smart contracts, stands as a promising candidate for building a more secure, user-friendly e-voting framework. Over a relatively brief period, blockchain technology has evolved into a pivotal innovation, rendering it the most secure choice for casting votes online. Online voting is a democratic system that grants individuals the freedom to exercise their democratic rights from any location in the Nation.

The discourse surrounding online voting encompasses a range of considerations, encompassing technological advancements, societal implications, and the organization of political decision-making. Electronic voting is well-suited to replace the conventional balloting method due to its ease and accessibility for voters. Democratic structures can be accessed from any computer with an internet connection, making it a suitable method for online voting. This approach has the potential to reduce lengthy queues at polling stations and enhance accessibility for individuals with disabilities, those who are unwell, military personnel or expatriates, those on short-term travel, and others who face challenges reaching a polling station. Blockchain is a burgeoning technology with untapped potential that finds application in an increasing number of domains. Initially employed for cryptocurrency transactions in the form of Bitcoin in 2008, it has since been integrated into various projects requiring a decentralized, secure, and anonymous method of storing and sharing information, eliminating the need for a Trusted Third Party (TTP).

II. LITERATURE SURVEY

SURVEY OF EXISTING SYSTEMS

- Dalia, K., Ben, R., Peter Y. A, and Feng, H. (2012). "A fair and robust voting system by broadcast." 5th International Conference on E-voting, 2012. This study proposes the addition of a commitment round to ensure fairness and a recovery round to allow the announcement of election results in case of voter abortion. Furthermore, it provides a computational security proof for ballot secrecy.
- Chaum, D., Essex, A., Carback, R., Clark, J., Popoveniuc, S., Sherman, A., and Vora, P. (2008). "Scantegrity: End-to-end voter-verifiable optical-scan voting." IEEE Security Privacy, vol. 6, no. 3, pp. 40-46, May 2008.This work introduces Scantegrity, the first independent End-to-End (E2E) verification mechanism that preserves

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An Analysis of Decentralized and Centralized Freelancing

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Abstract

In an ever-evolving digital landscape, the traditional freelance marketplace model faces challenges in terms of trust, transparency, and efficiency. The previous studies introduced a paradigm - a centralized Freelance Marketplace leveraging the Centralized server-based infrastructures. Those systems were leveraged a centralized technology to create a highly scalable and high speed application of freelancing. Due to inflict in some departments of these applications the new paradigm – a Decentralized Freelance Marketplace has been introduced where secure, transparent, and trustless environment for freelancers and clients were present to engage in a peer-to-peer manner. This study delves into the design, implementation, and potential benefits of this decentralized freelance marketplace, exploring the underlying blockchain architecture and smart contract functionalities that underpin its operation.

Keywords: Blockchain; Smart Contract; Decentralization; Freelance; Ethereum.

1. Introduction

This introduction acts as an initial exploration before the upcoming conversation, which intends to explore the design, execution, and probable benefits of this decentralized marketplace. It aims to offer a glimpse into the internal functioning of blockchain technology, the operational aspects of smart contracts, and the potentially groundbreaking nature of this model for the freelance industry. While progressing through the subsequent sections, readers will uncover the potential for a Decentralized Freelance Marketplace utilizing blockchain technology to potentially reformulate the landscape of employment, presenting freelancers and clients with a prospect of a fairer, streamlined, and less centralized future.

What is Freelancing?

Freelancing is a type of self-employment. Instead of being employed by a company, freelancers tend to work as self-employed, delivering their services on a contract or project basis. Freelancers offer their services directly to clients or through internet platforms. There are several websites that allow clients and companies to search for skilled professionals to work on their projects. Freelancers develop their profiles and portfolios on these websites and can bid on projects that are relevant to their skills. They also use social media as a tool to market their skills and get clients. Freelancers are typically hired on a contract basis and are paid according to the nature and duration of the work. Companies of all types and sizes can hire freelancers to complete a project or a task, but freelancers are responsible for paying their own taxes, health insurance, pension and other personal contributions. Since they work for themselves, freelancers must also cover their own holiday costs and sick pay. At the same time, self-employed professionals can set their own working hours and make working arrangements that fit their lifestyle – either working remotely or from their clients' offices.

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Scrutiny on Fundus Examination

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Abstract

Today's world is witnessing, an increased prevalence of eye diseases such as glaucoma, papilledema, and diabetic retinopathy which underscores the importance of early and accurate diagnosis for effective management and prevention of vision loss. The survey focuses on specific diseases and their identification and also includes their key features by using different techniques and tools.
One of the systems that we studied and reviewed for this project, utilizes a comprehensive dataset of retinal fundus images encompassing normal, glaucomatous, papilledema, and diabetic retinopathy cases. Convolutional Neural Networks (CNNs) are employed for feature extraction and classification, allowing the model to discern subtle patterns indicative of each pathology. Also, transfer learning is utilized to capitalize on pre-trained models, enhancing the efficiency of training and promoting generalization, across diverse datasets.
For glaucoma detection, the model that was viewed is trained to identify characteristic changes in the optic nerve head and retinal nerve fiber layer, crucial indicators by Machine Learning and Deep Learning models to provide great accuracy. For Papilledema detection the CNN models are trained to identify the key features of the optic nerves, and as for diabetic retinopathy, the different system uses key features such as blood clots and plasma clots in the retina.
For these individual systems were reviewed different sources, were reviewed, and different software and techniques to identify the diseases according to their key features.
These individual systems that were studied and reviewed for this project use different software and techniques for the identification of diseases through analyzing their associated key features.

Keywords: Fundus, Papilledema, CNN, RNN, Deep learning, Machine Learning, ANN

1. Introduction

The fundus is the inside, hindering the face of the eye. The retina, macula, optical slice, and blood vessels are part of the mortal eye deconstruction. Light-sensitive cells in the eye convert light into electrical impulses, which travel through jitters to reach the brain. The macula is a bitsy spot at the center of the macula lutea that focuses light and color into a single point directly behind your eye's iris on the retina for the sharpest central vision. The iris sits right behind the cornea, which bends incoming the optical fragment or " optical whim-whams head " is the place where the optical whim-whams exits or " leaves " the retina. They feed into the nutritional blood vessels in the fundus which nourishes the entire retina, all the way to where it hits the optical slice. Eye care interpreters use an on-invasive test called fundus examination to see the fundus or posterior face of the eye. It's a critical test in the opinion, evaluation, and follow-up of multitudinous ophthalmic ails similar to glaucoma, papilledema, diabetic retinopathy, etc.

Glaucoma
Glaucoma is a major cause of blindness worldwide, performed by a group of eye conditions that damage the optical whim-whams, responsible for conveying visual information from the eye to the brain. Although glaucoma can lead to gradational and unrecoverable vision loss, it can be managed and its progression can be braked or stopped. While glaucoma can affect people of any age, it's more

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Automated Detection of Oral Lesions based on Deep Learning for Early Detection of Oral Cancer

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Abstract

This project addresses the pressing issue of oral cancer, a problem causing increasing death rates globally.The solution involves utilizing an Automated Detection system, a smart technology based on deep learning. Think of it as a digital detective trained to identify oral lesions, which are early indicators of oral cancer.These lesions can be detected through images and patient records. The project focuses on employing a powerful technique called Convolutional Neural Network (CNN) within deep learning to make this detection process efficient and accurate. The significance of this approach lies in its ability to identify these lesions at an early stage.By catching them early, doctors can avoid invasive and often uncomfortable diagnostic procedures.Instead, patientscan be diagnosed swiftly and non-invasively leading to improved outcomes and higher survival rates. The ultimate goal of the project is to create a reliable and fast system. This system not only aids in early detection but also empowers healthcare professionals with a tool that enhances their ability to spot potential oral cancer cases efficiently. By doing so, it contributes significantly to the overall fight against oral cancer, ultimately saving lives and improving the quality of patient care.

Keyword: patients, oral cancer, CNN technique

1 Introduction

Oral cancer, a significant public health concern globally, poses substantial challenges in its early detection and intervention. Timely diagnosis is critical for improving patient outcomes, as delayed detection often leads to advanced stages and decreased survival rates. Traditional methods of oral cancer diagnosis have limitations, prompting the exploration of advanced technologies to enhance accuracy and efficiency. In recent years, deep learning, a subset of artificial intelligence, has emerged as a promising tool for medical image analysis.

This survey report delves into the realm of automated detection of oral cancer using deep learning techniques, synthesizing findings from seven research papers. The intersection of deep learning and oral cancer diagnosis holds the potential to revolutionize screening processes, providing a more robust and reliable means of early detection. As we navigate through the methodologies, results, and challenges presented in these studies, a comprehensive understanding of the current landscape and future prospects for automated detection using cutting-edge technologies.

Automated detection of oral cancer using deep learning and Convolutional Neural Networks (CNNs) has emerged as a promising approach to enhance the accuracy and efficiency of oral cancer screening. CNNs, a type of artificial neural network, are particularly well-suited for analyzing medical images and identifying patterns that differentiate between normal and cancerous lesions. CNN-based oral cancer detection offers several advantages, including high accuracy, objectivity, efficiency, and versatility. However, challenges remain in implementing this technology, such as the need for large, high-quality datasets of oral images, computational complexity, and clinical integration. Future research directions include developing more robust and generalizable CNN models, exploring transfer learning techniques, investigating the use of multimodal data, and conducting large-scale clinical trials.

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Abstract

Food is an essential aspect of human existence, and individuals are constantly exploring new and delectable dishes. Often, people choose food items from grocery stores without knowing their names or recognizing them immediately. Therefore, it is crucial to comprehend the elements that can be combined to create delightful recipes. Selecting the appropriate recipe from alist of ingredients poses a significant challenge for both novice and expert chefs. Machine learning plays a prominent role in our daily lives, such as in object recognition through image processing. However, traditional methods employed in this process, which involve numerous food items, present a higher risk of error. To address these challenges, we developed a model that identifies food ingredients and formulated an algorithm to recommend recipes based on the identified ingredients. Our research involved constructing a unique dataset comprising 9,856 photos, categorized into 32 types of food items. We utilized a Convolutional Neural Network (CNN) model for food item recognition and employed machine learning techniques to generate recipes. Our approach achieved an impressive accuracy rate of 94 percent, which holds significant practical value.

Keywords: food ingredients, recipe recommendation, machine learning, deep learning, Convolutional Neural Network (CNN), object recognition, image processing.

1. INTRODUCTION

In With the rapid advancements in sensor technology and GPU computing speed, deep learning algorithms have experienced significant acceleration in recent years. Within the field of computer vision, recipe detection of food images using deep neural networks has emerged as a prominent area of research. This technology involves automatically identifying the ingredients and recipe associated with a given food image, and it finds applications in food recognition, dietary tracking, recommendation systems, and food marketing.

The process of recipe detection begins by inputting a large dataset of food images into a deep neural network or utilizing a pre-existing trained model. The model extracts meaningful features from the images and learns representations that aid in ingredient identification. It then maps the identified ingredients to corresponding recipes, providing the most probable recipe associated with the input image. However, this process poses several challenges, including image noise, ingredient variability based on cooking style, composition, lighting conditions, and the complexity of analyzing a vast amount of images.

Despite these challenges, researchers have applied various approaches to enhance the efficiency of recipe detection. These include leveraging Convolutional Neural Network (CNN) architectures, employing transfer learning techniques, and utilizing ensemble methods. Such techniques have led to significant improvements in both the accuracy and speed of recipe detection, enabling more effective applications in health and wellness, recipe recommendation, and nutrition management.

While humans effortlessly recognize their surroundings and objects in their daily lives, computers require significant computational power, complex algorithms, and dedicated efforts to accurately identify patterns and regions where objects may be present. Object detection and recognition have been extensively studied and will implement over the years, forming the foundation of computer vision systems.

Overall, the field of recipe detection using deep learning techniques has shown promising advancements, offering valuable contributions to various domains, including health, wellness, and culinary experiences.

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CR System with Efficient Spectrum Sensing and Optimized Handoff Latency to Get Best Quality of Service

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Abstract: A wireless communication technology called Cognitive Radio (CR) makes use of the environment. White hole detection indicates that unitized spectrum identification is crucial. Here, effective spectrum sensing is crucial. In this article, a new threshold for effective spectrum sensing is developed. The CR system is a secondary user of unutilized spectrum Unused spectrum is used by the CR system as a secondary user. Power is wasted during unnecessary handoffs. To maintain the level of service, optimized handoff is required. The second step of this paper provided a new algorithm for CR systems' handoff optimization. Rapid decision-making and preparation are undertaken as part of a proactive handoff strategy for channel allocation.

The system has considered two parameters, first one is maximum idle to busy ratio and second is minimum handoffs it saves the power to get optimized handoff delay

Index Terms: *Cognitive Radio, Spectrum detection, RSS, Fuzzy Logic, ANN, Handoff.*

1. Introduction

We are having a shortage problem right now, so the bandwidth that is available should be used wisely. The users will be able to figure out spectrum tracking, spectrum control, spectrum sharing, and spectrum movement with the help of cognitive radio technology [22] [25]. Spectrum perception, spectrum analysis, and spectrum choice are the three main parts of the thinking loop [18]. Spectrum sense is the method used to figure out which frequencies are being used. Spectrum detection is important for the success of CR. The energy detecting method is used to measure the range. The method for detecting energy is simple, and the efficiency of the identification relies on the amount of the selection threshold [1]. IEEE 1900 is a standard for CR networks that was made by IEEE [19]. It shows how dynamic and opportunistic band access is used in different kinds of applications. In these circumstances, sensors may sometimes function alone or may cooperate to establish a small network of sensors that communicates information about the available spectrum using various interfaces recommended by IEEE 1900.6 standards. The data storage interface is used to store information that has been sensed. To use cognitive skills, people use the cognitive engine interface. This tool is also used to put radio access rules into place. Use a sensor device to get details about what is being sensed. Information must be shared between different platforms [19]. 4G is the next step for high-speed mobile internet. End-to-end IP and high-quality live video are two things that are likely to make 4G stand out. 4G is a global standard that makes it possible to move around the world. With the help of cognitive radio [20], this is possible.

Figure 1 gives accuracy v/s complexity graph of different spectrum methods.

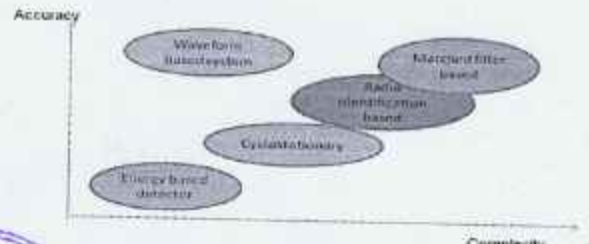

Fig: 1 accuracy v/s complexity

An analogue TV, digital TV, and low power licenced users, such as wireless microphones, are all detectable by a

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Deep Belief Network Model for Detection of an Outlier in Healthcare Data

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Abstract: Sports wristbands provide a rich source of information for a thorough understanding of people's physical conditions in the light of the popularisation of intelligent wearable gadgets. Outlier detection is still important since there are unknown outliers in the multi-dimensional activity data it supplies. Traditional methods of density estimation are hindered by the "curse of dimensionality," resulting in poor detection results. A Gaussian mixture generative model (GMGM) health data detection method is employed to address this issue. To begin, the model trains the original data with a variational autoencoder (VAE) and recovers latent features by lowering the reconstruction error. The latent distribution and extracted attributes are then utilised to forecast the varied membership of the samples using a deep belief network (DBN). Then, to prevent the effects of model decoupling, the variational autoencoder, deep belief network, and Gaussian mixture model (GMM) are optimised together. The Gaussian mixture model predicts the sample density of each data set and considers samples with densities more than the threshold as anomalies during the training phase. On the ODDS standard dataset, the model's performance is tested. The results reveal that the AUC index of GMGM is enhanced by 5.5 percent points on average when compared to the deep autoencoder Gaussian mixture model (DAGMM). Finally, the method's usefulness is demonstrated by the experimental findings on real datasets.

Keywords: *Curse of Dimensionality, Deep Belief Network, Gaussian Mixture Model, Variational Autoencoder, Healthcare*

1. Introduction

People have been paying more and more attention to healthy lifestyles in recent years. Sports bracelets are becoming increasingly popular as a way to track one's health. Hands that are athletic Rings may track people's activities and behaviours, such as how much they sleep, how long they sleep, their heart rate, and how many steps they take at the gym. A illness was discovered in the literature [1]. There are considerable disparities between sick and healthy bracelet wearers in the bracelet data, and various indications are more strongly related with specific circumstances, such as activity. Cardiovascular illness and metabolic disorders are linked to both steps and resting heart rate. The scarcity of information for bracelet wearers, in terms of practical analysis, relying solely on the data provided by the bracelet does not provide an accurate picture of their physical condition. For bracelets collected data, outliers are variations from indicators connected with specific conditions. As a result, the difference in the bracelet data must be determined. Constant value used to predict whether the user's body contains any hidden risks.

Because the distance between typical points is great, calculate the spread (or average distance) between each sample point and compare it to the distance threshold; if it is greater than the threshold, values are considered outliers. When dealing with high-dimensional data, however, the correlation distance becomes more important.

Distance and nearest neighbour lose their meaning, and the effect of anomaly detection deteriorates. The "dimension disaster" problem is prone to occur when doing anomaly detection in this era of big data since data has high-dimensional properties. To overcome this challenge, many studies have concentrated on the Constant value detection approach. A two-step strategy is used in the classic technique [2-4]. This is the first drop dimension, after which anomaly detection is performed. Both of these steps are thought separately.

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Enhanced Study of Deep Learning Algorithms for Web Vulnerability Scanner

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Abstract - The detection of online vulnerabilities is the most important task for network security. In this paper, deep learning methodologies for dealing with tough or complicated challenges are investigated using convolutional neural networks, long-short-term memory, and generative adversarial networks.Experimental results demonstrate that deep learning approaches can significantly outperform standard methods when compared to them. In addition, we examine the various aspects that affect performance. This work can provide researchers with useful direction when designing network architecture and parameters for identifying web attacks.

Keywords-SQL Injection, Cross Site Scripting, Generative Adversarial Network, LSTM, CNN, Deep Learning.

I. INTRODUCTION

Web applications have become increasingly popular in recent years and are now seen as the primary platform for a wide range of business activities, including financial banking, e-commerce, infotainment, and administrative reforms. However, the rapid development of web technology and the widespread use of the internet have created new challenges for online security. The increased accessibility of online information and services has also led to an unprecedented increase in the number and sophistication of security threats targeting web applications.

Web application vulnerabilities and exploits can be found using deep learning, a potent machine learning technology. To learn the patterns of regular and anomalous online traffic, deep learning models can be trained on massive datasets of well-known threats and vulnerabilities. This enables them to recognise potential assaults and vulnerabilities in real time, even if signature-based intrusion detection systems (IDSs) are not yet aware of them. A number of web threats, including SQL injection, cross-site scripting, and denial-of-service attacks, have been shown to be successfully detected by deep learning. Insecure coding techniques and out-of-date software are examples of vulnerabilities in online applications that can be found using this technique. Although the application of deep learning for web attack detection is still in its infancy, it is a

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Enhancing Cancer Immunotherapy Response Prediction using Multi-omics Integration and Deep Learning

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Submitted: 27/04/2023 **Revised**: 28/06/2023 **Accepted**: 08/07/2023

Abstract: Cancer immunotherapy has emerged as a promising approach to treat various malignancies by harnessing the patient's immune system to target cancer cells. However, the success of immunotherapy varies significantly among patients due to the complex and heterogeneous nature of the tumor microenvironment. To address this challenge, a novel machine learning approach is proposed to predict the response to cancer immunotherapy, utilizing a combination of multi-omics data integration and deep learning techniques.

Keywords: *data integration; multi-omics; integration strategies.*

1. Introduction

In recent years, immune checkpoint inhibitors and adoptive cell therapies have revolutionized cancer treatment. Despite notable successes, a substantial proportion of patients do not respond to immunotherapy, emphasizing the need for reliable predictive models. Conventional biomarkers and clinical factors have shown limited accuracy in forecasting treatment outcomes, necessitating a more comprehensive and data-driven approach. Cancer remains one of the most challenging and devastating diseases worldwide, affecting millions of people and causing a significant global health burden. Traditional cancer treatment modalities, such as chemotherapy and radiation therapy, have limitations, often leading to severe side effects and incomplete eradication of cancer cells.[16] In recent years, cancer immunotherapy has emerged as a groundbreaking approach that leverages the body's immune system to specifically target and eliminate cancer cells, offering new hope for patients with various malignancies.

While immunotherapy has shown remarkable success in certain cancer types, its efficacy varies considerably among patients due to the intricate and heterogeneous nature of the tumor microenvironment. The complex interplay between tumor cells, immune cells, and the surrounding stromal components can either promote or inhibit the immune response, resulting in diverse treatment outcomes.[18] Identifying patients who are more likely to respond favourably to immunotherapy is crucial for optimizing treatment plans and enhancing patient outcomes.

Conventional biomarkers and clinical factors have shown limited predictive capabilities in determining immunotherapy response, prompting researchers to turn to advanced machine learning approaches. Machine learning, a subset of artificial intelligence, offers the potential to analyze vast and diverse datasets, extract intricate patterns, and provide accurate predictions based on learned patterns.[17] In the context of cancer immunotherapy response prediction, integrating multi-omics data and employing deep learning techniques presents a promising avenue to decipher the underlying complexities of the tumor microenvironment and improve patient stratification.

This research aims to introduce a novel machine learning-based approach that incorporates multi-omics integration and deep learning algorithms to enhance cancer immunotherapy response prediction. By combining information from genomic, transcriptomic, proteomic, and immune cell profiling data, the proposed model seeks to provide a comprehensive and holistic understanding of the tumor-immune interactions, enabling more precise and personalized treatment decisions.

Importance of Cancer Immunotherapy:

Cancer immunotherapy is an innovative treatment strategy that seeks to exploit the immune system's natural ability to recognize and eliminate cancer cells. Unlike traditional therapies that directly target cancer cells, immunotherapy targets specific molecular checkpoints that regulate immune responses, thereby unleashing the immune system's full potential to attack cancer cells

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Gas Sensor Array Drift in an E-Nose System: A Dataset for Machine Learning Applications

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Abstract— Gas sensor arrays are widely used in various applications such as environmental monitoring, industrial process control, and medical diagnosis. However, one of the main challenges in using gas sensor arrays is their tendency to drift over time, which can significantly affect their accuracy and reliability. In this research paper, we present a gas sensor array drift dataset that can be used to evaluate and develop drift compensation techniques. The dataset consists of measurements from an array of eight metal oxide gas sensors exposed to six different target gases at varying concentrations over several months. The paper also describes the experimental setup, data acquisition process, and preliminary dataset analysis. Our results show that the sensor array exhibits significant drift over time and that the drift patterns vary depending on the target gas and concentration. This dataset can provide a valuable resource for researchers and engineers working on gas sensor array applications and can help advance the development of more robust and accurate gas sensing systems.

Keywords- Gas Sensor, VOC, PCA, Datasets, ANN.

I. Introduction

Gas sensors are widely used in various industrial and domestic applications to detect and monitor the presence of multiple gases. However, one of the significant challenges in gas sensing is the drift phenomenon, which leads to sensor performance degradation over time. Various factors, such as changes in environmental conditions, ageing of the sensor material, and sensor poisoning, cause drift. To address this challenge, researchers have developed gas sensor arrays that consist of multiple gas sensors with different sensing materials and operating principles. These arrays can compensate for the drift by analysing the response patterns of various sensors and extracting the relevant information.

In this research paper, we present a gas sensor array drift dataset that we have collected and analysed. The dataset consists of the responses of a six-sensor array to 11 different volatile organic compounds (VOCs) over 12 months. The sensors were exposed to the VOCs in a controlled environment, and their responses were measured at regular intervals. The research has also analysed the dataset to understand the drift phenomenon and its impact on the sensor array's performance. We have investigated the temporal stability of the sensor responses and their correlation with the VOC concentrations. Furthermore, we have evaluated the performance of various data preprocessing techniques and classification algorithms in detecting and compensating for the drift.

The gas sensor array drift dataset presented in this paper can serve as a benchmark for evaluating and comparing the performance of gas sensor arrays and drift compensation techniques. [1] Researchers and practitioners can use the publicly available dataset to develop and validate new approaches for improving gas sensing performance.

II. Related Work

Gas sensor array drift is a significant challenge in electronic nose (e-nose) systems. To address this issue, various studies have been conducted to investigate the underlying causes of drift and propose solutions [2]. Here are some related works on gas sensor array drift in e-nose systems:

"Development and application of a new low cost electronic nose for the ripeness monitoring of banana using computational techniques (2014): This study proposed a method for compensating for sensor drift in e-nose systems using principal component analysis (PCA). The authors found that the primary source of import was temperature and humidity changes and showed that PCA could effectively remove the drift signal from th.e sensor data" [3]

"Domain adaptation extreme learning machines for drift compensation in E-nose systems (2014): This study proposed a

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ORIGINAL RESEARCH ARTICLE

Introduction of machine learning with applications to communication system

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ABSTRACT

This research paper presents a brief introduction to the key point of Machine Learning (ML) with the application to communication systems. Due to the exceptional accessibility of software and data abilities, there is a great deal of interest in using digital information machine learning thinking to solve issues in a variety of fields. Regarding the phenomenal amount of information and computer facilities, there is a lot more interest in using content-supervised learning methods to resolve obstacles where engineering course techniques are restricted by theoretical or methodological problems. This study starts by clarifying when and why comparable strategies may well be effective. It then goes into the fundamentals of supervised and unsupervised at a high level. Where traditional engineering solutions are being developed Modelling or algorithmic flaws are posing a problem. This paper begins by answering the why and when of these questions. Such methods can be beneficial to resolve real-time problems. It then goes into the fundamentals of classification and regression problems at a world-class level. Exemplifying software to communications infrastructure is presented both for the structured and unstructured interviews by identifying roles performed first at the network's perimeter and cloud bits at multiple levels of the internet protocol suite, with a concentration on the application layer. The core contributions of this research study are as follows: (a) this research study explores the machine learning applications in communication system and networks optimization; (b) it offers an analysis of contributions of machine learning-based anomaly detection approaches to mitigate the security threat and maintains the integrity of entire communication network; (c) additionally, this research study provides further directions for research, future trends as well as challenges including the requirement for intelligent methods for network optimization, signal processing, etc.

Keywords: communication networks; communication systems; machine learning; supervised learning; unsupervised learning

1. Introduction

During the Artificial Intelligence (AI) winter of the late 1980s and early 1990s, awareness that the use of data-driven AI-based technologies in a variety of engineering fields, like as voice recognition analysis and communication systems has increased gradually. Unlike initial studies on AI, which were concentrated on logic-based intelligent systems, the newfound faith in data-driven methodologies is fueled by the success of design recognition apparatuses based on machine learning. These technologies consist of a variety of recent computational innovations, such as unique regularization strategies and evolutionary optimization schedules,

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Integration of Artificial Intelligence into Operations and Monitoring of 3R Manipulator

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Abstract: Artificial intelligence plays a pivotal role in the functionality and operation of robotic arms. Robotic arms are mechanical devices designed or characterized to resemble or mimic human form or behavior. In the context you provided, an anthropomorphic robot arm would be designed to replicate the movements and actions of a human arm., enabling them adapt to various tasks or functions such as assembly, pick-and-place operations, welding, painting, and more. AI enhances the capabilities of robotic arms by providing them with intelligent decision-making, adaptability, and autonomy. There is considerable enthusiasm surrounding the automation of industry, libraries, and warehouses, especially for pick-and-place operations involving products stored in shelving units. The main goal of this study is to gain command over a robotic arm by utilizing NI myRIO in industrial environments. the manipulation and transportation of objects traditionally rely on human labor. To overcome this challenge, we propose employing a robotic arm with a sufficient number of degrees of freedom. For the realization of the aforementioned tasks, the National Instruments myRIO model is employed, equipped with a diverse range of sensors, actuators, and displays. Serving as the control unit of this system, myRIO facilitates seamless operation. Three modules are provided; the initial module sets up a timer to produce a signal that operates the servo motors. The second module maneuvers the servo motor to a particular angular orientation at a steady angular speed. Lastly, the third module is employed to govern the servo motor in tracking any desired angular position, velocity, and acceleration.

Keywords: *Artificial Intelligence, Servo, Labview, NodeMCU, Velocity*

1. Introduction

AI algorithms enable robotic arms to perceive and understand the environment using various sensors such as cameras, depth sensors, force sensors, and tactile sensors. AI-powered computer vision algorithms analyze visual data to recognize objects, locate targets, and track movements. This perception capability allows robotic arms to interact with objects accurately and safely.AI algorithms are employed for motion planning and control of robotic arms. These algorithms determine the optimal path and trajectory for the arm to reach a desired target while considering obstacles, joint limits, and other constraints. Reinforcement learning, genetic algorithms, and other AI techniques help optimize arm movements for efficiency, speed, and accuracy [1-2].

AI is crucial for enabling robotic arms to grasp and manipulate objects of various shapes, sizes, and materials. Machine learning algorithms are used to analyze object features and develop grasping strategies, considering factors like object geometry, surface properties, and stability. AI-powered robotic arms can adapt their grip and manipulation techniques based on real-time feedback, improving success rates and handling a wider range of objects.AI facilitates learning and adaptation in robotic arms. Through techniques like machine learning, deep learning, and reinforcement learning, robotic arms can acquire new skills and refine their performance over time. They can learn from human demonstrations, sensor data, or simulated environments, allowing them to improve their capabilities and handle complex tasks more effectively [3].

AI enables robotic arms to collaborate with humans safely and efficiently. AI algorithms can analyze human intent and gestures to understand the desired task, adapting the arm's behavior accordingly. This facilitates close collaboration between humans and robots, leading to enhanced productivity and flexibility in shared workspaces.AI-based algorithms can monitor the

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EEG Signal Processing for the Identification of Sleeping Disorder Using Hybrid Deep Learning with Ensemble Machine Learning Classifier

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Abstract : It can be difficult for healthcare professionals to recognise and diagnose sliding disorder, a neurological ailment marked by a loss of coordination and control over movement. Signals from electroencephalography (EEG) have shown to be a useful method for examining brain activity and can shed light on neurological conditions. Using a hybrid deep learning framework and an ensemble machine learning classifier, we suggest a unique method in this study for the detection of sliding disorder. In the first step of our procedure, EEG signals from healthy controls and people with Sleeping disease are collected. To collect the necessary information, these signals are divided into shorter time intervals after being preprocessed to remove noise and artefacts. In order to obtain a concise representation of the EEG data, feature extraction techniques are used. This aids in highlighting significant patterns and traits connected to Sleeping disease. The proposed methodology is intended for integration into embedded devices to provide a novel and effective method for classifying sleep stages. For evaluation, the study makes use of Power Spectrum Density (PSD) Dataset. We experimented with a publicly accessible Power Spectrum Density (PSD) dataset of patients with sliding disease in order to assess the effectiveness of our suggested strategy. The outcomes show that our method outperforms both conventional machine learning algorithms and stand-alone deep learning models in terms of sliding disorder identification. The use of Hybrid Deep Learning with Ensemble Machine Learning Classifier together effectively enhance classification sensitivity of 89.06% and accuracy to 96.78%.

Keywords: *EEG Signal, Hybrid Deep Learning, Ensemble Machine Learning, CNN, Sleeping Disorder.*

1. Introduction

Sleep is an essential brain function that has a big impact on how well people work, learn, and move [1] Eyes closed, some nervous system centres go into active state during sleep, which causes partial or total unconsciousness and less sophisticated brain activity [13]. Humans spend over a third of their lives sleeping, so it is critical to treat sleep disorders like Obstructive Sleep Apnea (OSA), which can have serious negative effects on physical health [14,]. Notably, sleep difficulties affect more than 90% of those with depressive disorders [6,]. Around 2 to 4% of adults and 1 to 3% of children suffer from sleep apnea, while 33% of people worldwide experience symptoms of insomnia [15]. Consequences of sleep-related problems might range from melancholy and daily drowsiness to life-threatening conditions [6], [15]. For instance, drowsy driving is causes at least thousands of car accidents yearly only in US, and sleep-related factors are a major factor in many traffic fatalities and accidents around the world. Given these concerning data, it is crucial to create automated tools that can monitor sleep patterns and detect symptoms like weariness, drowsiness, and sleep disorders like apnea, insomnia, or narcolepsy.

As the gold standard for identifying and treating sleep problems, sleep stage scoring is a crucial step in the investigation of human sleep [17]. The process of identifying and classifying several sleep stages, which are crucial for comprehending sleep patterns, is known as sleep stage scoring. Polysomnographic (PSG) recordings made from patients during overnight sleep studies carried out in medical settings [5] are the main source of data used in the grading process. Sleep disorders are illnesses that interfere with a person's regular sleeping patterns. Compared to younger people, the elderly are more likely than other demographic groups to experience sleep disturbances. Insomnia and primary sleep disorders are two common forms of sleep disorders that are widespread in the adult population [1-3]. A substantial percentage of elderly persons (between 40% and 50%)

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Artificial Intelligence based Agricultural Chatbot and Virtual Assistant for Delivery of Harvested Crops

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Abstract: The integration of artificial intelligence (AI) in agriculture has the potential to revolutionize the industry, making it more efficient, sustainable, and productive. AI can be used to analyze data from various sources, such as satellite imagery, drones, and sensors, to provide farmers with valuable insights. It helps in optimizing irrigation, fertilization, and pesticide application by identifying areas of the field that require attention. AI algorithms can also predict crop yield, disease outbreaks, and recommend optimal planting and harvesting times. AI-powered systems can monitor crops and livestock through computer vision techniques and sensor data analysis. This enables early detection of plant diseases, nutrient deficiencies, or pest infestations. Livestock monitoring can include facial recognition to identify individual animals, behavior analysis to detect signs of illness or distress, and automated feeding systems. In developing countries like India, the rapid spread of mobile internet technology is offering a vital role in economic growth, social empowerment, and grass roots creativity. Every harvested crop needs to be transported. Transportation is one of the important factors for a farmer's success. Transport that is well-managed is effective in transporting farm resources and harvested products as quickly as possible. So we are going to develop an android application for farmers and transport service providers. By this, we can pool the farmers according to their requirements.

Keywords *– Crop transport, Chat-bot, Virtual assistant, transport, Cost reduction.*

I. Introduction

Ridesharing, as defined here, is an arrangement in which a farmer's goods are transported in a truck by its owner. Truck-sharing is defined as" an agreement in which a passenger shares the truck space with another person's vehicle for a predetermined period, for a profitable price, It is done using an agro App or website In addition, a user, a rider, or truck partner is the end-user that is requested or ordering the services [1][2]. Also referred to as ride sharing are services that let users book and pay for truck services using smart phone apps. The term goods as used above refers to any form of an agricultural product sent by a ride-sharing service provider and does not necessarily refer to a parcel [3]. AI is used in autonomous robots and drones to perform tasks such as seeding, spraying, and harvesting. These robots can navigate fields, make decisions based on real-time data, and work with precision, reducing labor requirements and increasing efficiency.

AI can analyze large volumes of data, including images of plants, to identify diseases accurately. Machine learning algorithms can learn patterns and symptoms associated with specific diseases, enabling early detection and timely intervention. AI algorithms can process historical weather data, satellite imagery, and climate models to provide accurate predictions. This information helps farmers plan their activities, optimize irrigation, and adapt to changing weather conditions, thereby reducing risks and improving resource management.

AI can improve logistics and supply chain management in agriculture. It can analyze market demand, optimize transportation routes, predict crop yields, and automate inventory management, ensuring timely delivery of agricultural products to consumers. Crop Breeding and Genomics: AI algorithms can analyze genetic data to accelerate crop breeding processes. By identifying patterns and relationships within vast datasets, AI can predict the traits and performance of different plant varieties, leading to the development of improved crop varieties with desirable traits.

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Analysis of Critical Diseases from ECG Signal Using Hybrid CNN and LSTM

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Abstract: -The application of machine learning algorithms for the analysis and diagnosis of severe diseases using electrocardiogram (ECG) measurements is a key area of research in the field of healthcare. Investigating, evaluating, and comparing the performance of several machine learning algorithms for the detection and diagnosis of severe diseases using ECG data is the aim of this study. Among the methods considered are convolutional neural networks (CNN), decision trees, random forests, extra trees classifiers, dense models, and hybrid CNN-LSTM models. A detailed analysis of the body of work on machine learning, ECG signal processing, and healthcare applications is done at the outset of the project. In order to ensure a diverse representation of the target population, the study makes use of a painstakingly selected and annotated dataset that comprises ECG signals from both healthy persons and those with major disorders. When it comes to binary classification, the CNN and CNN-LSTM models consistently outperform other algorithms thanks to their high accuracy, F1-scores, and AUC-ROC values. These algorithms demonstrate their ability to accurately classify ECG signals into significant disease and non-disease categories. The results of the multiclass classification provide as additional proof of the CNN and CNN-LSTM models' superior accuracy and F1-scores when used to classify a wide range of illnesses. In conclusion, this research contributes to the field of healthcare analytics by providing a complete assessment and comparison of machine learning algorithms for the diagnosis and analysis of severe diseases using ECG data. The results demonstrate the effectiveness of the CNN and CNN-LSTM models in terms of achieving high accuracy and F1-scores, paving the way for their potential application in clinical praxis. The article offers recommendations for additional research and progress in the field of ECG signal processing as well as emphasises the challenges and considerations that must be made when putting these algorithms into operation.

Keywords. *EEG, Machine Learning, CNN, LSTM.*

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Introduction:

Electrocardiogram (ECG) signals may be used to identify and analyse serious disorders, which has long attracted attention in the medical community. The electrical activity of the heart is shown by the ECG signals, which also aid in the diagnosis of a number of cardiac illnesses and anomalies [1]. Healthcare personnel have historically manually interpreted ECG signals to analyse them, which may be time-consuming, subjective, and prone to human error. Machine learning techniques have advanced, creating new opportunities for automating the analysis and identification of serious illnesses using ECG readings [2]. Large volumes of ECG data may be used to train machine

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A Comparative Study of Machine Learning Algorithms for Image Recognition in Privacy Protection and Crime Detection

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Abstract- In this work, machine learning techniques for picture recognition are compared. With diverse applications, from object detection to facial recognition, image recognition has emerged as a key area in computer vision. Computers can evaluate and comprehend visual input thanks in large part to machine learning techniques. However, because there are so many possibilities available, choosing the best algorithm for picture recognition jobs can be difficult. The common machine learning methods for picture recognition that will be studied and assessed in this study are convolutional neural networks (CNNs), support vector machines (SVMs), and random forests (RFs). Accuracy, computational effectiveness, and resistance to noise and fluctuations in image quality are some of the criteria used in the evaluation. The results of this study will help researchers and practitioners choose the best machine learning algorithm for their particular applications by revealing the advantages and disadvantages of various image recognition methods.

Keywords: *Machine learning, image identification, comparative analysis, k-nearest neighbours, random forests, and convolutional neural networks.*

1. Introduction

In the science of computer vision, image recognition has become a crucial subject that allows computers to interpret and comprehend visual input. Numerous uses exist for the capacity to automatically identify and categorize images, from object detection and segmentation to facial recognition and autonomous driving. [1] In order for computers to accurately anticipate outcomes, they must be able to understand patterns and features from big datasets, which is where machine learning algorithms come into play. However, choosing the best strategy for picture identification jobs is extremely difficult due to the wide variety of machine learning algorithms that are currently accessible.[5]

This work aims to carry out a thorough comparative analysis of various machine learning techniques for image identification. We want to offer helpful insights into the advantages, disadvantages, and suitability of these algorithms for diverse picture identification tasks by assessing and contrasting their performance. We will compare support vector machines (SVMs), convolutional neural networks (CNNs), and random forests (RFs) in particular. [15] The capacity of CNNs to automatically learn hierarchical representations from incoming photos has led to their phenomenal popularity and success in image identification applications. The groundbreaking research by Krizhevsky, Sutskever, and Hinton (2012) showed how well CNNs performed in the ImageNet Large Scale Visual Recognition Challenge, which sparked a flurry of deep learning research for image recognition.[10]

On the other hand, SVMs have established themselves as reliable classifiers that are frequently employed in a range of machine learning applications, including image recognition. Support-vector networks were first developed by Cortes and Vapnik (1995), who also showed how well they could handle challenging classification problems. SVMs are excellent for locating the best hyperplane in a high-dimensional feature space that maximally separates several classes. Breiman (2001) [13][16] Due to their capacity to manage high-dimensional data and offer robustness against noise and overfitting, they have showed good performance in a number of disciplines, including image recognition.[11][17]

Based on a number of important criteria, we will compare these three machine learning algorithms in this study. We will first evaluate each algorithm's performance in picture recognition tasks using benchmark datasets like ImageNet (Deng et al., 2009) and the ImageNet Large Scale Visual Recognition Challenge (Russakovsky et al., 2015). [14][18] We will also take each algorithm's computing efficiency into account, as real-time applications frequently need for quick processing. We will also evaluate the algorithms' resistance to noise and

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Green Technology Implementation for Environmental Sustainability; Applications and Challenges

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Abstract

Green technology implementation plays a pivotal role in the pursuit of environmental sustainability by aligning human activities with the preservation of our planet. It encompasses a spectrum of innovative approaches aimed at minimizing the ecological footprint of industries, infrastructure, and everyday life. By focusing on resource efficiency, pollution reduction, and the utilization of renewable energy sources, green technology contributes to mitigating the adverse impacts of human actions on the environment. Energy-efficient practices and smart infrastructure promote responsible energy consumption, minimizing waste and conserving natural resources. Moreover, green technology's influence extends to waste management, sustainable agriculture, and transportation, fostering practices that reduce pollution, promote circular economies, and minimize the depletion of finite resources. While challenges exist,

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Observation on the Information Retrieval Algorithm Based on Enterprise Correlation Financial Analysis under the Background of Big Data

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Abstract: The ascent of large information has delivered a change in outlook in the monetary examination scene for ventures. With the immense measures of information produced day to day, customary data recovery calculations face remarkable difficulties in actually extricating significant and significant experiences from this abundance of data. This paper presents a perception on the use of data recovery calculations in light of big business connection monetary examination with regards to enormous information. The discoveries from this perception shed light on the significance of consolidating progressed data recovery calculations in big business connection monetary examination under the background of enormous information. It features the meaning of utilizing huge information to improve monetary estimating, risk appraisal, and dynamic cycles. Also, the review accentuates the requirement for nonstop innovative work in data recovery strategies to adapt to the consistently developing volume of monetary information in the time of huge information. At last, this paper means to give important bits of knowledge to monetary experts, specialists, and undertakings hoping to tackle the capability of large information and data recovery calculations for vital independent direction and supportable development.

Keywords: *enormous, vital, accentuates, estimating, risk appraisal, dynamic, capability*

1. Introduction

Businesses are confronted with an unprecedented influx of information from a variety of sources during the era of big data, such as transaction records, customer data, market trends, and social media interactions. Businesses face both enormous opportunities and significant challenges as a result of this flood of data, particularly in the field of financial analysis. The capacity to extricate important experiences and relationships from tremendous and different datasets has become essential for pursuing informed choices and acquiring an upper hand on the lookout.The sheer volume and complexity of big data frequently make it difficult for conventional methods of financial analysis to keep up. Customary data recovery calculations, which are generally utilized to separate pertinent information and information from unstructured text or organized information, may vacillate notwithstanding the monstrous informational indexes produced in the present business scene. As endeavors keep on collecting an immense measure of monetary information, it has become obvious that new methodologies are expected to tackle the maximum capacity of this data for noteworthy bits of knowledge and informed navigation.

The joining of large information and high level data recovery calculations holds enormous commitment for ventures looking to acquire further experiences into their monetary presentation, risk openness, and market patterns. By tackling the force of enormous information, endeavors can uncover complicated connections among monetary factors and distinguish stowed away examples that couldn't be perceived utilizing customary examination techniques. These experiences can empower endeavors to go with information driven choices, improve monetary systems, and upgrade their general business execution. The discoveries from this perception will add to a more profound comprehension of the capability of data recovery calculations in big business monetary examination under the background of large information. It will reveal insight into the significance of utilizing progressed methods to open important bits of knowledge from the tremendous pool of monetary information, cultivating an information driven way to deal with monetary independent direction. Also, this study will highlight the requirement for continuous innovative work in data recovery calculations to adjust to the developing difficulties and open doors introduced by large information in the monetary space. Eventually, to offer significant bits of knowledge to monetary experts, specialists, and ventures endeavoring to outfit the capability of huge information and data recovery calculations for key navigation and manageable

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PREDICTION OF PNEUMONIA DISEASE FROM X-RAY IMAGES USING A MODIFIED RESNET152V2 DEEP LEARNING MODEL

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Citations (2) References (34) Figures (1)

Abstract and Figures

The lungs play a crucial role as the primary components of the human respiratory system, making them susceptible to inflammation and impact lesions in our daily lives. Among all infections, pneumonia holds the distinction of being the most widespread worldwide, with the lungs serving as the gateway for its spread throughout the body. In hospital settings, chest X-rays emerge as the most prevalent diagnostic tool employed to accurately identify pneumonia. Physicians heavily rely on these X-ray images to make precise diagnoses and monitor the progress of pneumonia treatment. Moreover, this type of chest X-ray facilitates the detection of other conditions like emphysema, lung cancer, the positioning of lines and tubes, and tuberculosis. The challenges faced by the existing deep learning models for pneumonia prediction include high computational complexity, prolonged model training times, and a lack of efficient preprocessing techniques. These issues contribute to misdiagnosis and inaccurate predictions of pneumonia. Moreover, the lack of interpretability in many of these models further hinders their acceptance and understanding in clinical applications. This research aims to tackle the challenges presented by current techniques by proposing a customized ResNet152v2 deep learning model. The primary objective is to design and deploy this modified ResNet152v2 model for pneumonia prediction from chest X-rays, achieving high accuracy while minimizing computational complexity and reducing computation time. This model outperformed well when compared with the existing methods and produced accuracy of 99.77%, Sensitivity of 99.86%, specificity of 95.4%, and precision of 99.86%.

Confusion matrix of the...

Figures - uploaded by Anitha Poosamoopper Author content

Chemical Protected Face Detection using Machine Leaning

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Abstract

The suggested system consists of the following steps: acquiring CCTV photos, processing those images, locating faces in the images, extracting information from those images, and recognising faces. Principal component analysis (PCA) and convolutional neural network (CNN) are the two feature extraction technologies we employ. We employ K-nearest neighbour (KNN), decision trees, random forests, and CNN. Applying these algorithms to the dataset of more than 40K real-time photos recorded at various conditions, including light intensity, rotation, and scale for simulation and performance evaluation, results in the recognition. Finally, we were able to recognise faces with over 90% accuracy and a minimum amount of computation time. A face shield, an item of personal protective equipment (PPE), aims to protect the wearer's entire face (or part of it) from hazards such as flying objects and road debris, chemical splashes (in laboratories or in industry), or potentially infectious materials (in medical and laboratory environments). Depending on the type used, a face shield may protect its wearer from a physical hazard, chemical splashes, or biological hazards.

Key: Chemical, Protected, Face, Detection, Machine Leaning, chemical splashes.

Introduction

In order to accomplish the necessary security, today's organisations must employ a number of individuals who have received specialised training. Human error, however, compromises safety. Today, closed-circuit television (CCTV) serves a variety of functions in daily life. Simple passive monitoring has been converted into an integrated, intelligent control system thanks to the

Computers in Digital Forensics using Machine Learning and Big date.

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Abstract.
Due to the rise in cybercrimes in recent years, digital forensics is becoming a crucial subject to research in order to gather reliable evidence. In order to recreate events, forensic investigators encounter challenges with data collecting and processing. Machine learning enables investigators to conduct more effective and efficient investigations utilising a variety of algorithms because of the significant contact that people have on a regular basis. A subset of artificial intelligence is machine learning. It is a branch of science that focuses on creating algorithms and computer models that can carry out particular activities without programming, such as dataset training and testing, and its potential to support investigations. In the course of an investigation, digital evidence is examined and analysed using a variety of machine learning techniques, which are reviewed in this paper. Every machine learning algorithm operates on a certain Based on the characteristics, each machine learning algorithm targets a particular area of digital forensics and solves challenges like complexity, data volume, timing, correlation, consistency, etc. Additionally, this study contrasts machine learning algorithms based on accepted standards. Forensic Chemistry can be defined as the practice of application of our knowledge in the field of chemistry to solve crimes. A forensic chemist can assist in the identification of unknown materials found at a crime scene There are several methods that a chemist can adopt from chemistry to help solve uncertainties at a crime scene. Forensic chemists use a variety of instruments to identify unknown substances found at a scene. Some examples of applications of forensic chemistry Spectroscopy techniques

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Controlled Motor Pump Using Arduino

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ABSTRACT:

A. **Build System Relay :**

We create connections to the solid state relays, Arduino and small fountain pump system, Arduino allows the pump open or close automatically. A striped cut through the inner tube of the pump segment insulated wire, only half. Install the new cut wire, there are two output relays at both ends. We put on the bare electrical tape. Finally, the ground relay is connected to the Arduino ground and relay input to the Arduino digital pins.

B. **Build up System Reservoir:**

Submerged pump supplies a desired amount of water needed by the plant in order to work properly. Automate this process, we use a float valve, which you need to open whenever needed, close the connection when the water level rises and water hoses. Drilling is high enough to ensure that the float valve chamber, sufficient to accommodate the width of the tank float.

C. **Build System tubing and connect:**

Connection to plastic lob feed pumps and drilling small holes through which water droplets. All of the trunk circuit.

D. **Code:**

Automated plant watering system is programmed using Arduino IDE software. Arduino microcontroller checks soil moisture level, if low, triggering a water pump on until sensor reaches threshold. After this, the system will re-check the soil moisture between periodic intervals to see if you need International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181 Published by, www.ijert.org NConPCS - 2017 Conference Proceedings Volume 5, Issue 18 Special Issue - 2017 3 more water. If the water in the initial inspection, no water or comment, the system waits 24 hours, and repeat the process.

Powerrequirement:

- Arduino-5v
- Moisture sensor-3.3V
- 4channelrelay-5v
- powersupply-230
- Motor pump – 5v

I. INTRODUCTION

We all know that plants are very beneficial to all human beings in many aspects. Plants helps in keeping the environment healthy by cleaning air naturally and producing oxygen. Many people love to have plants in their backword. But due to civilization and insufficiency of place many people used to grow plants in a mild or dirt, pot, and placed on the windowsill. These plants are dependent on conventional breeding watering, and provide the right amount of sun to sustain life and growth. In busy schedule of day to day life, many time people forget to water their plants and due to these plants suffer many disorders and ultimately died. In addition, the world's biggest problem in modern society is the shortage of water resources agriculture is a demanding job to consume large amounts of water. It is very essential to utilize the water resources in proper way. Thus, a system is required, to handle this task automatically. Automated plant watering system estimate and measure the existing plant and then supplies desired amount of water needed by that plant. It is minimizing the excess water use as well as keeping plants healthy.

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Spy Robot Using Microcontroller

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ABSTRACT:A robot is usually an electro-mechanical machine that guided by computer and electronic programming.Many robots have been built for manufacturing purpose and can be found in factories around the world.Designing of the latest robot which can be controlling using an android mobile.In developing the remote buttons in the android app can be control the robot motion.Android Bluetooth enables phones and Bluetooth module HC-06 and communication among Bluetooth devices.It is concluded that smart living will gradually turn into are reality that consumer can control their home remote and wirelessly.According to commands received from android the robot motion can be controlled.In IP web camera interface will also be through wireless communication for need to have a receiver installed in mobile.so both the camera view and the navigation of the camera can happen simultaneously from pc using Bluetooth interface.

KEYWORDS: Compact,robot ,spying ,camera control,surveillance

I.INTRODUCTION

Robotics study becomes an extremely large field because it contains a huge amount of different technologies, but I have covered the most important areas.In discuss about some automation system and different types of automation.we need robots in our life. What kind of advantages we can receive from robots by viewing robot applications and the quality that can be provided by comparison to human work. The typical industrial robot which looks like a human arm has six different joints like an elbow joint, a shoulder joint and a rest joint. These joints are powered by a servo motor or a hydraulic motor or whatever type of motor. These powered motor joints enable robot to reach objects in several ways. The amount of joint space motor drive is depending on the nature of a robot task. The more sophisticated the job the more motions we require so extramotor drive is need. All these six motor drives need to be controlled to achieve specific task and sometimes we do not need to use all of them so we eliminate motor joint depending on the task requirements.

II.OBJECTIVE

The objective of a spy robot project can vary depending on its specific design and purpose. Generally speaking, the objective of a spy robot project is to create a robot that can operate in environments where human presence is not possible or desirable, and collect information or data without being detected.

Some common objectives of a spy robot project includeSurveillance: Creating a robot that can capture visual or auditory data from a specific location, such as a building or a public space, without being detected.

Reconnaissance: Designing a robot that can navigate through hazardous or dangerous environments, such as disaster zones or war zones, and provide real-time information about the situation.

Industrial inspections: Developing a robot that can conduct inspections in hazardous environments, such as nuclear power plants or oil rigs, and gather information about the state of the equipment or facility.

Scientific research: Creating a robot that can collect data and samples in remote or inaccessible locations, such as deep sea or outer space, to advance scientific research.

III. LITERATURE REVIEW

Design and development of a miniature spy robot" by S. Prakash, et al. This paper describes the design and development of a small, remotely controlled spy robot that can be used for surveillance in sensitive areas. The robot has a camera, microphone, and can transmit data wirelessly."Design of a robot for surveillance and reconnaissance" by D. Dheeraj Kumar, et al. This paper presents the design and development of a robot that can be used for surveillance and reconnaissance in various environments. The robot is equipped with a camera, GPS, and sensors to detect obstacles.Development of a snake-like robot for reconnaissance" by H. Kim, et al. This paper describes the development of a snake-like robot that can navigate through narrow spaces and gather data for reconnaissance purposes.

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Design and Implementation of Vehicle Tracking System with GPS

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Abstract: An efficient vehicle tracking system is designed and implemented for tracking the movement of any equipped vehicle from any location at any time. The proposed system made good use of a popular technology that combines a Smartphone application with a microcontroller. This will be easy to make and inexpensive compared to others. The designed in-vehicle device works using Global Positioning System (GPS) and Global system for mobile communication / General Packet Radio Service (GSM/GPRS) technology that is one of the most common ways for vehicle tracking. The device is embedded inside a vehicle whose position is to be determined and tracked in real-time. A microcontroller is used to control the GPS and GSM/GPRS modules. The vehicle tracking system uses the GPS module to get geographic coordinates at regular time intervals. The GSM/GPRS module is used to transmit and update the vehicle location to a database. A Smartphone application is also developed for continuously monitoring the vehicle location. The Google Maps API is used to display the vehicle on the map in the Smartphone application. Thus, users will be able to continuously monitor a moving vehicle on demand using the Smartphone application and determine the estimated distance and time for the vehicle to arrive at a given destination
Keywords: Problem Statement introduction, literature survey,General Project Description,Advantages & Applications, Conclusion And Future Scop , Refrences

I. INTRODUCTION

A. Background

Traffic is on the rise as the demand for vehicles is getting higher day by day. So, transportation needs improvement as, since demands are increasing, there will be more possibility of vehicle accidents. Vehicle accidents are one of the leading causes of the fatalities. It will be a serious consequence if people can't get help on right time. Poor emergency incident is a major cause of death rate in our country. Crash analysis studies have shown, traffic accidents could have been prevented with the use of this advanced life saving measure. This design focuses on providing basic information on the accident site to the hospital or police station. As a result of this sudden help, precious life may get saved. In this work, a three-axis accelerometer and GPS tracking system work for accidental monitoring. This design detects accidents in less time and sends this information to the required authorities. In this case GSM will send short message to the hospital or police station. This message will read the geographical co-ordinates of accident spot with the help of GPS. And, as now the location has been traced by the GPS, emergency medical service can be given to the accident victims as soon as possible. A key will be provided for the driver. If the accident is very normal, or driver has hit the wall in some situations like parking then driver will press the key. This will inform the microcontroller that this is a very normal accident. But if driver is not in situation to press the switch or if the accident is really a major accident, then driver will not press the key. Then microcontroller will get the coordinates from the GPS modem then it will send this information to the GSM modem, GSM modem is used to send this information via SMS. SMS will be sent to the family member of the driver, so that they can take immediate action to help the persons suffering due to this accident. This project is fully equipped by IR sensors circuit and Pneumatic bumper activation circuit. It is a genuine project which is fully equipped and designed for Automobile vehicles. This forms an integral part of best quality. This product 2 underwent strenuous test in our Automobile vehicles and it is good. Many years ago, wheels were the part of a log and it slowly utilized for carts and wagons. The wooden wheel utilized was hard wood stakes. Trucks have become the backbone of the workforce in the world. They are large, strong and could be move on roughest of terrains. Truck rims should be placed if they are cracked. The project of truck rims is manufactured in the similar manner. It begins with tough hub and 4 to 6 holes for the bolts. Truck wheels require durable which carry some weight. Lighter wheels are developed by decreasing unsprang mass and permit suspension to follow the terrain and develop grip. Better heat conduction spoils heat from the brakes that develops braking function in driving situations and decreases the brake failure because of overheating. The spun steel rim is saved with welds series. The rim is balanced and provided the smooth finishing. The main advantages of all pneumatic systems are economy and simplicity. Automation plays an important role in mass production.

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Password Based Doorlock System Using Microcontroller

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ABSTRACT: The purpose of this project is to provide security at house, ATM, office etc. in this system the user will have to register a unique password. The information will be stored in data base. Whenever the right password will be received, the controller will accordingly give instruction to dc motor. Dc motor will perform the action on door unlocking. We want to utilize the electronic technology to build an integrated and fully customized home securitySecurity is a prime concern in ouer our day today life.Assess control for door form avital link in an assess control system that allows only person to assess a area individual protects his /her valuable belongings and documents and tries to make it as secure as possible. Increase in robbery has resulted in greater demand for secure storage system.

KEYWORDS: Motor, Microcontroller, LCD, Keypad

I.INTRODUCTION

Many times we forgot to carry the key of our home. Or sometimes we come out of our home and door latch closes by mistake. In these cases it is really difficult to get inside the house. This project is designed to solve this purpose. Main concept behind this project is of a door-latch opening using a password entered through keypad. As well as turning on the Buzzer when password is entered wrong. Today people are facing more problems about security in all over world, nowadays security is the most essential issue everywhere in the world so security of everything gains higher and higher importance in recent years. The main component in the circuit is 8051 microcontroller. Here, 4*4 keypad is used to enter the password. The entered password is compared with the predefined password. If it is correct password, the system opens the door by rotating door motor and displays the status of door on LCD. If the password is wrong then door remains closed and displays —password is wrong on LCD. It can be used at organizations to ensure authorized access to highly secured places. With a slight modification by replacing the motor driver with a relay driver, this circuit can be used to control the switching of loads through code. This circuit can be also modified by using EEPROM chip interfaced to the microcontroller and store the entered password in the chip. Such an automatic lock system consists of electronic control assembly which controls the output load through a password. This output load can be a motor or a lamp or any other mechanical/electrical load.

II.LITERATURE SURVEY

LiaKameliaetal [1] this paper gives overall idea of how to control home security for smart homes especially for door key locks. They used android based door lock system for indoor and outdoor key lock system. It also provides a secure system for Android phone users. This project based on Android platform which is Free Open Source i.e. it is easily available. So the implementation rate is inexpensive and it is reasonable for a common person. The wireless Bluetooth connection in microcontroller permits the system installation in more easy way. The system has been designed successfully and aimed to control the door condition using an Android phone which is Bluetooth enabled via Bluetooth HC-05. Smart Home is the term commonly used to define a residence that uses a home controller to integrate the residence's various home automation systems.

ShilpiBanerjeetal[2] this paper gives detail information about system in which we can unlock the door by using pre-decided password. It increases the security level to prevent an unauthorized unlocking done by thief. In case the user forgets the both passwords, this system gives the flexibility to the user to change or reset the password. This automatic password based lock system will give user more secure way of locking-unlocking system. First the user combination will be compared with prerecorded password which are stored in the system memory.

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Novel Approach for Vehicle Accident Detection

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ABSTRACT: Throughout many years with rapid growth of technology focusing on automobiles sectors has been increased. With increased in population and the ratio of vehicles on road also has been increased. According to WHO road accident is major reason for increased in human death. As advancement in research area moving further towards autonomous vehicle there is huge demand and need for vehicle accident identification. Also there are some systems available in the market for in vehicle monitoring of surrounding using camera module or Automatic Breaking System also there are some systems available for preventing major damage to vehicle or for drivers safety measures like advanced airbag with alert system. This paper introduces a novel approach for Vehicle Accident Detection System using MPU6050, GPS Neo 6m and SIM800L modules. Approach aims towards low cost, more accurate and efficient module for vehicle accident detection.

KEYWORDS: Road Accident, Vehicle Accident, Microcontroller, Alert System, GSM, GPS, Accelerometer.

I. INTRODUCTION

Nowadays vehicles play a major role in our society from start of the day to end of the day most people uses vehicles to reach out their work destination or at another place. Rapid growth in Standardization and Globalization had a major impact on lifestyle in India. Majority towards standard living with increased in demand of Vehicles in India. Nowadays a vehicle with added features are much more in demand with increased in competitors which are leading the vehicle market in India. Also, road accidents are major issue faced by many governments. Especially in India road accidents are increased from year 2013 till now. Most of the reports focused on the death report stated the lack of emergency alert systems. In most of the cases location of the accident is unknown due to this medical services being delayed in reaching the accident spot. Indian government prioritized the road safety as first priority. According to the study of Ministry of Road Transportation India suggest that there were 4,12,432 road accidents claimed during the year 2021 with of which 1,53,972 cases were failed to recover. Still the numbers are increasing each year [1]. In addition to the safety measures various activities are launched by government of India to reduce the incidents. Major activities involving approaching entrepreneurs for latest innovations through the activities like make in India, Smart India Hackathon, and Innovate India [2]. In advancement the paper proposed a prototype for Automatic vehicle accident detection system using accelerometer sensor MPU6050, a GPS module Neo 6m, a GSM module for alert SIM800L. Basic idea behind the project is using accelerometer to sense the tilting of the vehicle. Further tracking GPS location and sending the alert message to the emergency helpline using GSM module. In most of the country's area is limited for mobile network range but using GSM module for emergency toll free number will be very useful in all the areas.

II. RELATED WORK

There are various accident detection systems are available in the market, as the automobile sector moving towards the advancement and automation various work in this fields were taken some of these work includes:

A system integrated with GPS, ZigBee Communication protocol for tracking the real time location of the vehicle. Using accelerometer for detection of accident [3]. Another approach uses an inbuilt vibration sensor to detect the vibration during accident which is the part of the inbuilt airbag system. So, whenever accidental vibrations are sensed the system will automatically sends an alert sms using GSM module and sends location using GPS device [4]. Using

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Wind Speed Monitoring System for Sailing

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ABSTRACT: -Environmental conditions affect outdoor sports performance in the sport of sailing, where environmental parameters are influential as they interact directly with strategic analysis of the race area. For these reasons, this research presents an innovative methodology for the strategic analysis of the race course that is based on the integrated assessment of meteorological data measured on the ground, meteorological data measured at dam during the training activities and the results. The results obtained by the above analysis are then integrated into a graphical representation that provides to coaches and athletes the main strategic directions of the race course in a simple and easy-to-use way. On the other hand, the results of this analysis can be used effectively for the improvement of athletes' performances

KEYWORDS: -Wind speed sensor, Temperature sensor, Arduino Uno, SIM900 GSM Modem, Battery, Solar panel, 16x2 LCD Display, Voltage sensor, Relay.

I. INTRODUCTION

The effect of weather and environmental conditions on sports has been studied over the years. The data measured by system stations have been used to determine the weather requirement is satisfies for the sailing sports. This paper explains the development of wind monitoring system from there mote location of dam. The steps involve investigating the wind speed, designing the system, developing the system, testing, and validating. The result shows that the system can measure the wind speed on the spot in real time and send this data to the thing speak server. On the other hand, it also informs the forecast of wind speed according to weather web services data few hours before. Applying this system will help the water sports enthusiasts to determine the weather condition so flake side where water sports is learned and practiced. Wind intensity varies and wind direction remains almost constant (or also there is a variation of the "wind pressure"). The determination of the regatta field type is essential to set up a correct strategy. Wind speed analysis is useful for both coaches and athletes.

II. LITERATURE SURVEY

The main objective of [1] Strong wind allows uproot the trees and causes human victims to be injured or dead. Unfortunately, the strong wind comes suddenly to the trees on the street and many people and traffic are around there. It needs wind speed monitoring and strong wind early warning to avoid the victims due to fallen tree. This paper explains the development of wind monitoring and early warning system using wind speed sensor and weather forecasting. The steps involve investigating the wind speed, designing the system, developing the system, testing, and validating. The result shows that the system can measure the wind speed on the spot in real time and trigger the alert to the people around if the strong wind was occurred. On the other hand, it also informs the forecast of wind speed according to weather web services data few hours before. Applying this system will help the government to prevent the victims of fallen tree due to strong wind.

[2] This paper aims to build a low-cost, reliable, weather monitoring system capable of acquiring and recording data. The proposed system has three sensors that measure the temperature, wind speed and wind direction respectively. The analogue outputs of the sensors will be transmitted through the air and received by the weather system where converted to digital signals and further processed by a microcontroller, acting as data logger. The logged data can then be transferred to a PC having a graphical user interface program for further analysis or printing the measurements. The system has many advantages like it is a small size and have huge memory capacities, have on device LCD display, lower cost if compared with other climate monitoring system and have high processing speed, high precision and greater portability.

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IoT Based EV Charger Using Arduino UNO

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ABSTRACT: Electric vehicle supply equipment (EVSE) is the basic unit of EV charging infrastructure. The EVSE accesses power from the local electricity supply and utilizes a control system and wired connection to safely charge EVs. An EVSE control system enables various functions such as user authentication, authorization for charging, information recording and exchange for network management, and data privacy and security. It is recommended to use EVSEs with at least basic control and management functions, for all charging purposes.

In this project, we apply the Internet of Things (IoT) model to managing electric vehicle (EV) charging in shared spaces, such as condominiums. The mobile application manages the user authentication mechanism to initiate the electric vehicle charging process, where a sensor is used to measure the current and based on the microcontroller, the device establishes communication data with the mobile application. A user interface has been developed to visualize the process happening, show the various sensor data to the user and send alerts.

KEYWORDS: Energy efficient algorithm; Manets; total transmission energy; maximum number of hops; network lifetime

I. INTRODUCTION

Electric vehicles are recharged by electricity. Whether you already drive an electric vehicle (EV) or are thinking of getting one, charging plays a critical role in driving an EV.

With the mass adoption of electric vehicles (EV's) on the horizon, the importance of smart electric vehicle charging will become essential for both the charging point network operators, and the National electricity grid

One of the major challenges when entering the electric vehicle (EV) market is the charging process, where the main problems are related to the lack of proper infrastructure in residential (apartment) buildings due to their unpreparedness for this new reality. The apartment has a shared electricity problem, which does not meet the requirements of EV owners. Based on new advances in the Internet of Things (IoT) and related sensors and communication platforms, systems have the potential to create new solutions to these problems. Another aspect of this challenge is related to rental housing and the possibility of needing electric vehicle charging assistance in these circumstances. In condominiums, unfortunately, there is a general reluctance to install EV charging stations, which will only be used by a few owners.

In addition, there is also an issue related to the safety of the electrical systems, as they are not actively built to support EV charging stations, and the adjustment of the electrical infrastructure of the apartment will not only requires consensus among a majority of owners, which can be difficult, but can also be difficult to obtain, from government building safety authorities. Considering the fact that most residential buildings have common spaces with shared electrical installations and are not prepared for the installation of new EV charging systems, this is a barrier to adoption. A study identified four key problem areas in the context of charging infrastructure unavailable, building boundaries, regulatory issues, and availability of the parking lot.

II. PROBLEM STATEMENT

This project has been developed within the context of a time where EVs sales have skyrocketed. The government is also pushing hard for encouraging people to choose EVs over conventional vehicles. But one of the major challenges with electric vehicle (EV) is the charging process, where the main problems are related to the lack of proper infrastructure in residential (apartment) buildings, streets and alongside roads due to their unpreparedness for this new reality. Also, different EVs have different power plugs as they have different input current ratings while most of them operate at 230VAC.

Such hurdles related to charging discourage people from buying EVs and limit the overall usage, range and reliability of EVs. These drawbacks of EVs can be easily reduced by introducing IoT based EV charger with universal power plug support along with smart payment and monitoring method, which can be installed at every possible location to facilitate ease of access to charging.

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"ELECTRONIC JACKET FOR WOMENSAFETY"

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Abstract- **India is rapidly moving on the path of being a promising super power and an economic hub. But this goal can be achieved if the large number of women participate in the development process, and join for jobs. In India at the recent past there are more number of crimes on women and children who are attacked/harassment when walking or traveling alone in cab or unknown area. In many cases it is almost midnight and it is helpless for the person who is attacked to escape from the criminals. Also, in many cases the person cannot even open her mobile and inform anyone, so we decided to provide the solution for this major problem in our country which is also the primary concern of women. The security system for women which allows immediate response in the case of any harassment, it consists of Arduino Nano, GPS, GSM, camera, battery, switches. The system has a power switch which is used to switch on the circuit and the second switch when pressed sends the location to predefined numbers and police station. The third button is used to switch on the camera which is connected to the circuit which will capture images of the culprit. With all the technology available to us in recent times, it's not hard to build a safety device for women who will not only generate an emergency alarm but also send a message to your friends, family, or concerned person. Here we will build a band that can be worn by women, using which they can inform police or anyone, using emergency SMS along with the current location. Using this information, the police can be able to save the victim from the location. For this, here we are using an Arduino which can be interfaced with GSM and GPS module for sending SMS alerts and getting the location coordinates.**

Keywords-
ESP32 Camera, GPS module, GSM, Push Button, Connecting wires, Arduino Nano

I. INTRODUCTION

The systems are bulky and are not portable where in these cannot be carried easily anywhere, anytime. It requires more hardware, which in turn increases the implementation cost. The systems do not provide a complete kit solution to the existing problem. As we can see above the entire systems are separated with each other and lack the of one stop solution to problem of women safety. The level of security can be increased more by electronics assistance device having portability that can be carried anywhere, which can track the location of women, captures the image of culprit and makes the alert call to the registered family numbers in times of danger. The electronic gadget (project) is implemented using Internet of Things (IoT) gadget will be used in the public places such as malls, bus stands, offices etc. The description of the hardware's and the software tool required for making the women safer is given in the further topics.

II. REVIEW OF LITERATURE

Electronic jacket for women safety: Women safety application using android mobile. In this paper system can show exact location to relatives, parents, and friends and track every time interval. Emergency panic button using microcontroller. In this paper panic button is used for protection while emergency situation occurs [1]. AVR microcontroller based wearable jacket for women safety. In this paper studied combination of wearable jacket and mobile technology for safety of women in the society. This system helps

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"SMART ENERGY METER"

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*Abstract—**The effort of collecting electricity utility meter reading. Internet of Things (IoT) present an efficient and coeffective to transfer the information of energy consumer wirelessly as well as it provides to detect the usage of the electricity the main intention of this project is measure electricity consumption in home appliances and generate its bill automatically using IoT. The energy grids need to be implemented in a distributed topology that can dynamically absorb different energy sources.***

IoT can be utilized for various applications of the smart grid with distributed energy plant meter, energy generation and energy consumption meter smart meter, energy demand side management and various area of energy production.

*Keywords— **Smart Grid, Energy Meter, Internet of Things.***
*Keywords- **Voltage Sensor, Current Sensor, Relay, Connecting wires, ESP wi-fi controller***

I. INTRODUCTION

1. Existing System

Energy meters are a mystery to many people but spending just ten minutes to find out a bit more ab out how yours works could save you lots of cash. That's because regular meter readings can help you pin down how much energy you are using – and identify where you might be overpaying. In addition, meters break and do go wrong. If your meter is playing up then you need to tackle the problem now so you don't get overcharged in error.

Here are some of the most common meter problems – and how to deal with them. First things first: many meter reading errors come from the energy firm misinterpreting the information you give them. I've seen a number of examples recently of people moving in to new properties, giving readings and being hit with totally unrealistic bills.

There are lots of reasons for this, but usually it's the energy firm's own system refusing to accept that its previous estimates were miles off and applying the wrong rates. Remember the firm should be working off the readings you give when you move in, not estimates – so check that bill

2 Proposed System

The proposed system replaces traditional meter reading methods and enables remote access of existing energy meter by the energy provider. also, they can monitor the meter readings regularly without the person visiting each house represents the module at User's House consisting of several hardware components.[5]

II. REVIEW OF LITERATURE

Anitha et al., [1] proposed "Smart energy meter surveillance using IoT" about IoT, internet of things as an emerging field and IoT based devices have created a revolution in electronics and IT.

The foremost objective of this project is to create awareness about energy consumption and. efficient use home appliances for energy savings. Due to manual work, existing electricity billing system has major drawbacks. This system will give the information on meter reading, power cut when power consumption exceeds beyond the specified limit using IoT. The Arduino esp8266 micro controller is programmed toper form the objectives with the help of GSM module. It is proposed to overcome all the disadvantages in the already existing energy meter. All the details are sent to the consumer's mobile through the IoT and the GSM module and it is also displayed in the LCD. It is a time saving sand it helps to eliminate the human interference using IoT. Devadhanishini et al., [2] "Smart Power Monitoring Using IoT" that energy Consumption is the very important and challenging issue.

Automatic Electrical Energy meter is used in large electric energy distribution system. The integration of the Arduino WIFI and SMS provides the system as Smart Power Monitoring system. Smart energy meter provides data for

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VOICE CONTROLLED LED & MOTOR USING RF

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ABSTRACT

Automation is a trending topic in the 21st century making it play an important role in our daily lives. The main attraction of any automated system is reducing human labor, effort, time and errors due to human negligence. With the development of modem technology, smart phones have become a necessity for every person on this planet. Applications are being developed on android systems that are useful to us in various ways. Another upcoming technology is natural language processing which enables us to command and control things with our voice. Combining all of these, our paper presents a micro controller-based voice-controlled led & motor using radio frequency. Such a system will enable users to have control over every appliance in his/her home with their voice. All that the user needs are an earbud ,which is present in almost everybody's hand nowadays, and a control circuit. When the first computers came around, achieving the level of sophistication so as to narrate commands using voice to a machine was only realized in science fiction. However, with tremendous breakthrough in the field, we are at the precipice of truly using voice to interface with devices.

I. INTRODUCTION

It involves automatic operation of home appliances with totally different technologies and controlled over any of the devices like desktops, laptops smart phones or tablets. Home automation system makes the operations of various home appliances a lot of convenient and also saves energy. With the energy saving conception, home automation or building automation and smart homes makes life very straight forward today. It involves automatic operations of all electrical or electronic devices in homes or perhaps remotely through wireless communication like Internet of Things (IOT), Radio frequency is a system of connected physical objects that is accessible through. The 'Thing' in IOT may be someone with a monitor, i.e. objects that are assigned an information science addressing and have the power to gather and transfer knowledge over a network without manual help or intervention. Smart phones affordability increases day to day because of their sizes , technology enhancement with different movability. This project is an application that possesses the potential to regulate any kind of electrical appliances providing full remote access from earbuds using RF. RF technology is Wireless radio transmissions in an exceedingly short distance providing a necessary technology to make convenience, intelligence and controllability. This generates the personal space networks in the home surroundings, wherever of these appliances are interconnected to each other employing with a single controller.

II. METHODOLOGY

This system contains the different microprocessor based electronics devices like Voice recognition module, ATmega328, Relay drivers, Radio frequency as power supply and some software applications those are as follows:

The Voice recognition module is used to connect the earbud and ATmega328 for the operations of appliances at any interval by the help of Radio signal.

For the interfacing and process the signals the ATmega328 is used here.

For the ON and OFF operations of the appliances the relay drivers used as electromagnetic switch.

For the different loads individual relays is used either at same driver or at different drivers for each relays.

Uses earbud internal voice recognition to pass voice commands to your device. Pairs with RF and sends the recognized voice as a string. For example light ON & OFF indicate the start and stop bits. Can Be used with any micro controller which can handle strings. Examples Platforms : Arduino , ARM , PICAXE, MSP430, 8051 based and many other processors and controllers.

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ADVANCED FOOTSTEPS POWER GENERATION SYSTEM

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Abstract: Day by day, the population of the country is increasing and the requirement of the power is also increasing. At the same time the wastage of energy is also increasing in many ways. So, reforming this energy back to usable form is the major solution. In this footstep power generation project, we are generating power with the help of human's footsteps; this power is then used to charge battery. The power is stored in a battery that can be used to charge a mobile phone using RFID card. This system is powered by Atmega 328 microcontroller, it consists of Arduino IDE, RFID sensors, USB cable and LCD. When we power on the system, the system enters into registration mode. We can register three users. Once all the user is entered in the system then the system asks to swipe the card and connect the charger. Initially all the user is given by 5 minutes of charging time as default. When we swipe the card and if the user is authorized, the system turns on for charging and will charge the Mobile phone. If the user is un-authorized then the system will display as unauthorized user, just in case if the user wants to stop the charging in midway the user needs to swipe the card again. As soon as the card is swiped again, the remaining time balance is displayed and the charging stops. In order to recharge a card, we need to press recharge button which is on the system, and then system will ask to swipe the card, once the user swipes the card, it adda more 5 minutes to the particular card of the user.

Keywords: ATmega328P, Piezoelectric Sensor, LCD's, Crystal Oscillator, Resistors, Capacitors, Transistors, Cables & Connectors, Transformer/Adapter, PCB.

I. INTRODUCTION

Energy is nothing but the ability to do the work. In day-to-day life, Electricity is most commonly used energy resource. Now-a-days energy demand is increasing and which is lifeline for people. Due to this number of energy resources are generated and wasted. Electricity can be generated from resources like water, wind etc. to generate the electricity from these resources development of big plants is needed having high maintenance cost. Some other energy resources are also costly and cause pollution. They are not affordable to common people. Electricity has become important resources for human being hence, it is needed that wasted energy must have to utilize, walking is the most common activity done by human being while walking energy is wasted in the form of vibration to the surface. And this wasted energy can be converted into electricity. Using the principle called piezoelectric effect. Piezoelectric effect is the effect in which mechanical vibrations. Pressure or strain applied to piezoelectric material is converted into electrical form. This project gives idea about how energy is used on stepping on stairs. The use of stairs in every building is increasing day by day even small building has some floors when we are stepping amount of this wasted energy is utilized and converted to electricity by Piezoelectric effect. Piezoelectric effect is the effect of specific materials to generate an electric charge in response to applied mechanical stress.

II. OBJECTIVE

This project aims to convert mechanical energy from footstep, walking, and running into electrical energy, thereby utilizing the wasted energy in a useful manner. The generated power can be utilized for various purposes, such as illuminating road lights, operating traffic signals, and powering electronic devices that require low power. The primary objective is to use transducers to convert the mechanical energy into electrical energy and store it in energy storage devices, which can be used later as per the requirement.

III. LITERATURE REVIEW

- **Shivani Mahesh Pandit: June 2021**

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Password Based Circuit Breaker Control

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ABSTRACT: The major problem in the power system is the electrical accidents while repairing the electrical lines due to the lack of communication between the electrical substation and maintenance staff. This project gives a solution to this problem to ensure line man safety. Also the load distribution system has been proposed in which sharing of the load is done between village side and city side.

KEYWORDS: circuitbreaker, Manualloadsharing,Voltage Regulator.

I.INTRODUCTION

Now a days, electrical accidents of the line man are increasing while repairing the electrical lines due to lack of communication between the electrical substation and maintanence staff. This paper gives a solution to this problem to ensure line man safety. In this proposed system the control(ON/OFF) of the electrical lines lies with line man. This paper is arranged in such a way that maintenance staff or line man has to enter the password to ON/OFF the electrical line, Now if there is any fault in electrical line then line man will switch off the power supply to the line by entering thepassword and comfortably repair the electrical line, and after coming to the substation line man switch on the supply to the particular line by entering the password. Here, there is also a provision of changing the password. circuit breakers are actually provided as a means of protection to completely isolate the downstream network in the event of a fault . The demand for electrical energy is ever increasing. Today over 21% (theft apart!!) of the total electrical energy generated in India is lost in transmission (4-6%) and distribution (15-18%). The electrical power deficit in the countryis currently about 18%. Electric power is normally generated at 11-25kV in a power station. To transmit over long distances, it is then stepped-up to 400kV, 220kV or 132kV as necessary.The demand for electrical energy is ever increasing , to overcome this problem Load sharing concept is included. This paper focusing on village side and city side based on the load demand and the required voltage is transferred from village side to city side and vice versa.

II. LITERATURE SURVEY

The embedded systems are electronic devices which are incorporated microprocessors with in their implementations. The embedded systems designers generally have a significant grasps over hardware technologies. They use specific programming languages and software to develop embedded systems and manipulate the equipment. Embedded systems often use a slow processor and small memory size to minimize costs. An embedded system is a specialpurpose system in which the computer is completely encapsulated by or dedicated to the device or system it controls. Unlike a general- purpose computer, such as a personal computer, an embedded system performs one or a few pre-defined tasks, usually with very specific requirements. Password based circuit breaker: A circuit breaker is an automatically operated electrical switch designed to protect an electrical circuit from damage caused by overload or short circuit. Its basic function is to detect a fault condition and interrupt current flow. Unlike a fuse, which operates once and then must be replaced, a circuit breaker can be reset (either manually or automatically) to resume normal operation. When operated manually we see fatal electrical accidents to the line man are increasing during the electric line repair due to the lack of communication and coordination between the maintenance staff and the electric substation staff. In order to avoid such accidents, the breaker can be so designed such that only authorized person can operate it with a password. Here, there is also a provision of changing the password. The system is fully controlled by the 8 bit microcontroller of 16f877A family. The password is stored in an EEPROM, interfaced to the microcontroller and the password can be changed any time unlike a fixed one burnt permanently on to the microcontroller. A keypad is used to enter the password and a relay to open or close circuit

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Automatic Railway Gate Control Using Microcontroller

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ABSTRACT-The objective of this paper is to control the railway tracks by using anti-collision techiques.The model of railway track controller is designed by using 8051 microcontroller to avoid railway accident.When we go through the daily newspapers we come across many railway accidents occurring at unnmanned railway crossings. This is mainly due to the carelessness in manualoperations or lack of workers. And also the collision of two trains due to the same track. This model is implemented using sensor technique. We placed the sensors at a certain distance from the gate detects the approaching train and accordingly controls the operation of the gate. Also an indicator light has been provided to alert the motorists about the approaching train.

I.INTRODUCTION

Railway safety is a actual aspect of rail operation over the world. Railways being the cheapest mode of transportation are preferred over all the other means .When we read newspaper , we come across many railway accidents occurring at unmanned railway crossings. This is mainly due to the carelessness in manual operations or lack of workers. And also collision of two trains due to the same track. This models deals with two things. Firstly, it deals with the reduction of time for which the gate being kept closed. And secondly, to provide safety to the road users by reducing the accidents that usually occurs due to carelessness of road users and at times errors made by the gatekeepers. To avoid accidents, sensors placed at some distance from the gate detect the departure of the train. The signal about the departure is sent to the microcontroller, which in turn operates the motor and opens the gate. Thus, the time for which the gate is closed is less compared to the manually operated gates since the gate is closed depending upon the telephone call fron previous station. Also reliability is high, as it is not subjected to manual errors.

II. LITERATURE SURVEY

The automatic railway gates operation has been projected using various methods. As proposed by Xishi Wang (1992), the process of developing fault tolerance method has been applied for both the hardware and the software components. Magnetic sensors placed underground to detect the train are less affected by environmental changes and recognizes the direction of movement of vehicles. Jeong Y (2008) defined the railway auto control system using OSGi and JESS. The state of railway cross has been estimated using JESS in the technique. The issues in the technique are the insufficient inline citations and also multiple issues related to OSGi. The different methods used by locomotive pilots which can avoid the accidents and the safety measures while crossing the level crossings are also discussed. Atul Kumar Dewangan (2012) gave a detailed introduction about the present railway technology and also discussed the disadvantages of manually activated railway signals and the railway warnings at the level cross. The train detectors act as the major component in the train automation system. Banuchander J (2012) developed a method to concentrate on anti-collision system to identify the collision points and to report these error cases to main control room, nearby station as well as grid control stations.Efficient Zig-Bee based Train Anti-Collision using Zig-Bee technology for railways is implemented. Greene R.J. (2006) anticipated an intelligent railway crossing control system for multiple tracks that features a controller which receives messages from incoming and outgoing trains by sensors. These messages contain detail information including the direction and identity of a train. Depending on those messages the controller device decides whenever the railroad crossing gate will close or open. But this technique has the issue of high maintenance cost.

III.OBJECTIVE

The objective of this project is to create an automatic railway gate control system which can be implemented easily in roads. Generally there are manual gate control system which are maintained by person.As vehicles are increasing day by day it has become more difficult to control the gate manually.As a result often accident occurs and many people

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WATER POLLUTION MONITORING SYSTEM USING RC BOAT

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Abstract:- Nowadays there is an ever increasing strain regarding the provision of clean, consumable water. This problem especially arises in rural areas due to the ineffectiveness of the governments and the increasing population in the country. Therefore, this particular project aims to detect and display real-time physicochemical quality of the water in a much more cost effective manner, as opposed to the current methods which involve sampling and laboratory methods, through its wireless, multi-sensor network.

*Keyword:- Turbidity Sensor, PH Sensor, Temperature Sensor, Servo Motor, Esp 8266 Wifi Module, LCD Display 16*2, Microcontroller, RF Data RX, Regulator.*

I. INTRODUCTION.

In the 21st century, there were lots of inventions, but at the same time were pollutions, global warming and so on are being formed, because of this there is faces challenges because of global warming limited water resources, growing population, etc. Hence there is need of developing better methodologies to monitor the water quality parameters in real time[1]. The water quality parameters pH measures the concentration of hydrogen ions. It shows the water is acidic or alkaline. Pure water has 7pH value, less than 7pH has acidic, more than 7pH has alkaline. The range of pH is 0-14 pH. For drinking purpose it should be 6.5-8.5pH. Turbidity measures the large number of suspended particles in water that is invisible. Higher the turbidity higher the risk of diarrheoa, collera. Lower the turbidity then the water is clean. Temperature sensor measures how the water is, hot or cold. Flow sensor measures the flow of water through flow sensor. The traditional methods of water quality monitor involves the manual collection of water samples from different locations. With the rapid growth of the thrift/providence, more and more serious troubles of environment arise. Water defilement is one of these problems. Regular monitoring of water quality parameters are Conductivity, pH, turbidity, dissolved oxygen, chemical oxygen demand, biochemical oxygen demand, ammonia nitrogen, nitrate, nitrite, phosphate, various metal ions and soon. The most common method to detect these parameters

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Rain Sensing Automation Wiper

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ABSTRACT: Using the wipers is a manual operation that must be switched on remove rain and debris from the screen. It requires not only the driver's attention, but also causes some discomfort to the driver and acts as a distraction that increases risk of accidents. To provide the driver with comfort and significantly reduce the risk of accidents, an automatic rain sensor has become essential. Although such a device is available in the market, its high cost and other such limitations made it less popular in the automotive industry. Purpose The purpose of this work was to provide another such model to the market that limits costs while maintaining costs efficiency the main components are a rain sensor, a microcontroller and a controller integrated circuit (IC). Used in the construction and problem-free operation of the proposed device. Falling water is fast and is precisely detected by the rain sensor, which then sends a signal to another component, i.e. the microcontroller which in turn activates the driver IC to turn on the required movement of the wipers with servo motor. This device transforms cumbersome manual operation into smooth automatic operation.

KEYWORDS- Automatic rain sensor, Rain sensor, Automatic windshield wiper.

I. INTRODUCTION

The windshield wiper is an important component in vehicles. It plays an important role in cars. It offers the driver good visibilityduring the rainy season. The windshield wiper helps clean the windshield and ensures good visibility through it. This helps to reduce accidents in fog and rainy season. In the years 1910- 1920, vacuum cleaners were used in cars after the invention of the electric wiper and it is used in the years 1920-1930. And after 1940, intermittent wipers were invented and used until 1980. A manual wiper requires the driver to pay attention to the on/off button and also adjust the wiper speed because it takes the driver's attention away from the road and increases the chance of an accident. So automation is needed to reduce or prevent accidents in motor vehicles. So that the driver can concentrate on the road. Automation is most needed in a car for safety reasons, because it reduces the work of the driver so that he can concentrate more on the road while driving. Therefore, automatic wipers are necessary in vehicles,it increases the safety of the driver and passengers. It also improves visibility on the road and reduces driver effort. To prevent drivers from interfering with the wiper motor control, we designed this automatic rain sensor and wiper speed according to rainy conditions. This system consists of: Rain detection mechanism, processing and control unit, output controllers, etc. This system works automatically, its wipers turn ON when it detects rain and OFF when it stops raining.

II. LITERATURE SURVEY

Semi-Automatic Rain Wiper System: Tapan S Kulkarni, This study deals with simple and easy design of Semi-Automatic Rain Wiper. It is partial because it is being introduced in cars for the first time. This system is developed using 8051 microprocessor. This article found that they use a cup sensor that is reasonably priced. Here, the sensor device is basically used in a conical cup with a tray on top to collect as much wateras possible. This tabletop model of a semi-automatic wiper system has successfully operated in three different levels of rain intensity and is veryinexpensive to be applied to tourist class vehicles.

Automatic Wiper System: Shantanu Dharmadhikari: This articlepresents an automatic wiper systemthat is used to remove raindrops and activate car wipers without driver intervention. This system has been developed to reduce the effort of the driver so that he can concentrate on the main task of driving. The goal of the project is to develop an automatic windshield wiper system that automates the process where the driver reacts to the rain manually using the windshield. By reducing the need for drivers to adjust the wiper speed while driving, the number of distracted driving accidents can be slightly reduced. The demonstration is able to simulate the operation of the system as if it were installed in the car.

Automatic wiper control with optical rain sensor: Hidedki Kajioka, Automatic wiper that detects raindrops with an

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Rakshak - Smart & Intelligent Army Jacket

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ABSTRACT: The Indian army is the land-based branch and it is the largest component of Indian Army. It will be beneficial for our country's safety if we try to provide them better advanced technology equipment. In this paper we have explained how to track the location of the soldier with the help of GPS and also, we will be able to monitor health parameters such as heartbeat and body temperature. The measured parameters will be sent to the control room with the help of GSM module to know the condition of the soldier. If the soldier is injured the fluctuations with the heart beat will be measured and will inform the military base station through GSM module and from GPS, we can locate the wounded soldiers. From this information we can strategize the future war plan with the actual number of unharmed soldiers and also, we can provide the needed medication for the harmed one with the location provided by the GPS. The proposed system will be consisting of wearable physiological equipment's, sensors and transmission modules which are mounted inside the jacket for communication between soldier and base station or between soldier and soldier. Hence, it is possible to implement a low-cost mechanism to protect the valuable human life on the battlefield.

KEYWORDS: Lifejacket, Raspberry Pi Pico, GPS, GSM, LM35 Temperature sensor, Heartbeat sensor, Battery.

I.INTRODUCTION

The soldier must be integrated with advanced visual, voice and data communications to receive information from the control station or from the superiority. For that Soldier might need wireless networks such as displaying maps and real time Li ion/Li po only to communicate with control room but also with side-by-side military personnel. Apart from the nation's security, the soldier must need safety by protecting himself with advanced weapons and also it is necessary for the army base station to monitor the health status of the soldier.

II.LITERATURE REVIEW

This section provides a summary of the studies that used Deep Learning (DL) and numerous other efficient and creative techniques to control the temperature, heating purpose. To monitoring health of respective person the sensors are implemented. To know the location the GPS tracking system is used. Using IOT, the status of the solder can be transferred from one place to another over the network. The health status of the soldier is monitored using bio medical sensors such as temperature sensor and heart beat sensor.This paper proposes a new idea based on Peltier effect and a Peltier plate with heat sinks and small Dc fans is used inside the jacket and the current of the Peltier module is controlled by lily pad controller. Additionally, a temperature sensor is used inside the jacket and this sensor has capability to measure both the humidity and temperature. Output of this sensor is attached with lily pad controller and an LCD is also connected with lily pad to display the results. The whole circuit is powered up using solar strip attached on the upper layer (back side) of the jacket and the amount of sunlight is directly proportional to the cooling inside the jacket as the power from the solar strip increases by increasing the amount of sunlight. While Peltier plate is not commonly used in applications like cooling a room or in large size refrigerators due its inefficiency, very small amount of power input is used for cooling purpose when current is too high. Whereas from results discussed in this paper one can use Peltier plate for cooling small size areas like a jacket.

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Smart Helmet Safety Using- ATMEGA 32

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ABSTRACT: The purpose of this project is to provide safety against accidents.The objective of our project is to design a low-cost intelligent helmet that is capable of identifying alcohol communication and preventing road accident. Smart helmet safety system is the idea that has been developed for the social responsibility towards the society.

KEYWORDS: Safety, Sensor, Helmet Unit, Bike Unit, Helmet Authentication, Fall Detection.

I.INTRODUCTION

The main purpose of this is to protect the peoples from the accidents which are occurring day by day. If the accident takes place, there are more possibility of having no ambulance on time and also we know that in emergency case there is no vehicle available. Due to this, information of the particular person will not get to their family and he or she will die. In order to avoid this situation, we have designed a system where the no accidents will reduce to half. That's why we are discussing about to make this digital helmet to protect the lives of the peoples. With Smart Helmet we can give information about the accident as soon as possible or at a time with the help of this concept we can minimize the death rate in bike accident. Behind of this concept 'Smart helmet' there are some features in it such as Bluetooth, calling features, music, SOS emergency alert systems, accident detection. The main advantage of this features, we can easily detect any accidental issue which is most important day to day life.

II. LITERATURE REVIEW

According to the raceme Research paper in 2016 titled 2 Helmet using GSM and GPS technology for accident detection and reporting system. The author specially developed this project to improve the safety of the bikers. The objective of this project is to study and understand the concept of RF transmitter and RF receiver circuit. The project uses ARM7, GSM and GPS module. The project also uses buzzer for indication purpose. Whenever the accident will occur then accident spot will be note down and information will send out on the registered mobile number.

According to the Research paper in 2015 titled "Microcontroller based smart wear for driver safety. In this paper author has discussed on the speed of the vehicle. In this application the project will be monitoring the areas in which the vehicle will be passing On entering any cautionary areas like schools, hospitals, etc the speed of the vehicle will be controlled to a predefined limit. LCD is used for showing the various types of messages after wearing the helmet. The author has worked only on the phenomenon of accident which is generally happens due to drunk and drive. But as we know that the accident in the area is not happens only due to consuming alcohol but also other parameters like speed are also responsible.

III. WORKING

This smart helmet has two sections i.e. Helmet section and bike section. In helmet section we have 3 input devices that are attached to it which are push button, alcohol sensor and tilt sensor. Alcohol sensor is used to detect either the rider is drunk or nor and push button is mounted on the top inner part of the helmet that is used to detect either rider is wearing helmet or not. When the rider is not drunk and he is wearing the helmet then only the bike will start otherwise ignition of the bike won't start in the first place.

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SMS voting system using 8051 microcontroller

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ABSTRACT: Mobile voting systems are used to vote securely. Previously, voting took place through traditional methods such as voting booths, punch cards, lever voting and optical voting machines, which are now replaced by some electronic media. All this takes more time to vote. The proposed system is developed to select their candidates through a smartphone application. The process consists of three steps: online voter registration via SMS (Short Message Service) concept , voter voting and publication of the results.This provides greater efficiency for voters to vote anytime, anywhere via the Internet. The important aspect of this is to provide more security to the kernel, because every vote counts, and every vote must be kept secret. This prevents voters from using an OTP (one-time password) to vote multiple times each time they log in and log out.

KEYWORDS: Initial Setup of the System; Registered Cell Phones; Ideas about SMS security; Encryption

I.INTRODUCTION

Introduction to SMS Voting Machines India is the largest democracy in the world. The basic right to vote or simply to vote in elections forms the basis of Indian democracy. In India, all previous elections are conducted by voters using ballot papers. This is a time-consuming and error-prone process. This continued until the electoral scene was revolutionized by electronic voting machines. No more ballot papers, ballot boxes, stamps, etc. All of this is contained in a simple box called an electronic voting machine voting unit. Mobile phone-based voting machines can save a lot of printed stationery and carry large amounts of election materials. It is easy to transport, store and maintain. This completely removes the possibility of invalid votes.This reduces voting time, which reduces problems with election preparation, policing, candidate expenses and more. Easy and accurate counts without any shenanigans in the count center. The goal of our project is to design and develop a voting machine based on a mobile phone. The objective of the project is the implementation of a voice system based on GSM (Global System for Mobile Communications). The system is implemented using an embedded microcontroller.The integrated single-chip computer used here is the AT89S51 single-chip computer. In fact, the goal of this project is to set up an automated voting system. GSM-based voting machines are fully controlled systems. There is no chance of error. The system mainly works using different technologies such as traditional cellular networks like Global System for Mobile communications (GSM) and other radio frequency carriers.Today, banks equipped with mobile phones, cars, ambulances, fleets and police cars are everywhere. Functional units of our project are GSM MODEM, LCD display, PC database and AT89S51.

II.OBJECTIVE

The AT89S51 is a low-power, high-performance 8-bit CMOS microcontroller with 4KB of on-board memory. Programmable flash memory. This device is manufactured using Atmel high-density non-volatile memory. Compatible with 80C51 technical and standard guidelines and pinouts. Its on-chip Flash Program memory can be reprogrammed either within the system or through conventional non-volatile memory. Combining a versatile 8-bit CPU with in-system programmable flash memory in a monolithic programmer chip.The Atmel AT89S51 is a powerful microcontroller that provides a highly flexible and cost-effective solution. Many button management apps.

III.LITERATURE REVIEW

In today's world of growing advanced mobile technology, the traditional voting method can be changed to a newer and more effective approach termed mobile voting. The mobile voting system provides a convenient, easy, and

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Industrial Control using CAN Bus Communication with Embedded System

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ABSTRACT: Nowadays industrial automation systems have become popular in many of industries and play crucial role in controlling several process-related operations. Due to the implementation of wide variety of industrial networks with their geographical distribution over factory or industry, the floor data transferring and controlling capability had become more sophisticated and easy ranging from low-lever to high-level control. These industrial networks are routed through various field buses that uses various communication standards like CAN protocol, Profibus, Modbus, Device net etc. So let us look how CAN communication works for automating the industries and other automation based systems.

KEYWORDS: CAN Bus Protocol, Embedded System, Remote monitoring system

I. INTRODUCTION

Industrial automation and control consist of three levels of control is performed to automate the whole system these three levels are control and automation, process control, and higher-order control. The Control and Automation level consists of various field devices like sensors and actuators to monitor and control the process variables. Process Control Level is a central controller responsible for controlling and maintaining several controlling devices like microcontroller The Higher Order Control Level is a desired output level that manages all operations. The communication bus is the major component in industrial automation for reliable transfer of data among the controllers, computers and also from the field devices. In this project we have used CAN bus protocol for communication.

As our project is proposed that in industry there is lot of reflections to be avoided to that we connecting sensor devices to atmega328 for detecting the errors and automatically correct the error without manual work. Nowadays industrial automation system have become popular in many of the industries and play a crucial role in controlling several process-related operations. Due to the implementation of a wide variety of industrial networks with their geographical distribution over factory or industry, the floor data transferring and controlling capability has become more sophisticated and easy ranging from low-level to high-level control. These industrial networks are routed through various field buses that use various communication standards like CAN protocol.

II.LITERATURE SURVEY

In an automated industrial installation, CAN bus is most commonly used as part of a distributed control system, connecting vital systems that may be spread throughout a facility. Generally a Human Machine Interface (HMI) allows the operator to interact with the system. CAN is often found in use on production lines in manufacturing environments, allowing operators and equipment to effectively communicate at each step of the assembly process. Building automation is another area where the speed, low cost, and ease of installation have made CAN bus communication a popular choice to connect access control, security, and environmental systems.

III. DEVICE FABRICATION & COMPONENTS

- Atmega Microcontroller
- Temperature Sensor
- Gas Sensor
- LDR

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IOT Based Underground Cable Line Fault Detection

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ABSTRACT: IOT based underground cable line fault detection system is helpful for find out faults and its location in very easy manner .Underground cables have been widely used with the development of power system grid .Underground cables are prone to a wide variety of faults due to underground conditions, wear and tear, rodents .Detecting fault source is difficult because entire line is to be dug in order to check fault at cable line. The repairmen know exactly which part has fault and only that area is to be dug to detect the fault source. Thus it saves a lot of time, money and allows to service underground cable lines faster. We use IOT technology that allows the authorities to monitor and check faults over internet. The system detects fault with the help of potential divider network laid across the cable. When a fault gets created in a cable line, a specific voltage gets generated as per the resistors network combination. This voltage is sensed by the microcontroller and is updated to the user. The information conveyed to the user is the distance to which that voltage corresponds to. The microcontroller detects the fault cable line data and displays this data over LCD display, it transfers this data over internet to display online. Thing Speak to develop the online system that links with the system to display the cable faults online.

KEYWORDS: Thing Speak

1. INTRODUCTION

Underground cables have been widely used with the development of power system grid. Till last decades cables were made to lay overhead & currently it is to lay underground which is superior to earlier method. Because the underground cable are not affected by any adverse weather condition such as storm, snow, heavy rainfall as well as pollution. But when any fault occur in underground cable, then it is difficult to locate the exact location of fault. Today the world is become digitalized so this paper is intended to detect the location of fault in digital way. The underground cable system is more common practice followed in many urban areas. While faults can occur for different reason in cableline, the repairing process related to that particular cable is difficult due to not knowing the exact location of cable fault. As it is very difficult to find the exact location or faulty location maually, which suddenly affects the efficiency of the cable wire due to losses occurred. Nowadays many techniques had already been implemented in order to detect cableline fault. But the problem came up is how to detect fault in cable wire when it is under grounded, and how to access or retrieve those data related to faulty location whenever it is required.

In order to fill those gaps, we proposed the system which detects the exact location of the fault and through the means of IoT it's serially communicated towards server. The project "IoT based underground cable line fault detection system "is used for find out and locating the faults. The manual method is very time consuming. Here, we propose a cable fault detection over IoT that detects the exact fault position over IoT that makes repairing work very easy. For most of the worldwide operated low voltage and medium voltage distribution lines underground cables have been used from many decades. The complexity of the whole network comprises numerous components that can fail and interrupt the power supply for the end user. Use of underground power cable is expanding due to safety considerations and enhanced reliability in transmission and distribution in recent times. Due to safety reasons and high power requirements use of underground cables has been increased. To increase the reliability of the system proper fault detecting and locating techniques are required. The inaccessibility of the underground cable makes the location and detection of fault in the cable a challenging task. The fault detecting and locating techniques play a very important role in maintaining the system and thereby increasing the reliability.

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Review on IOT Based Solar Tracking and Monitoring System with ESP 32

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ABSTRACT: An IoT-based solar tracking and monitoring system using ESP32, servo motor, LDR sensor, voltage sensor, current sensor, temperature sensor, and Blynk app is proposed. The system tracks the sun's position and adjusts the solar panel, accordingly, maximizing the amount of sunlight that hits the panel and increases the efficiency of the solar system. The system also monitors various parameters of the solar system, such as voltage, current, temperature, and light intensity, and sends this data to the Blynk app for real-time monitoring. The system is implemented using an ESP32 microcontroller, which is a low-cost and powerful microcontroller with built-in Wi-Fi and Bluetooth connectivity. The ESP32 is connected to a servo motor, which is used to rotate the solar panel. The ESP32 is also connected to the LDR sensor, voltage sensor, current sensor, and temperature sensor. The system is implemented using an ESP32 microcontroller, which is a low-cost and powerful microcontroller with built-in Wi-Fi and Bluetooth connectivity. The ESP32 is connected to a servo motor, which is used to rotate the solar panel. The ESP32 is also connected to the LDR sensor, voltage sensor, current sensor, and temperature sensor sun. If the light intensity is below the threshold, the ESP32 will stop rotating on the solar panel. The ESP32 also reads the voltage, current, and temperature sensors and sends this data to the Blynk app.
The system works by first reading the light intensity from the LDR sensor. If the light intensity is above a certain threshold, the ESP32 will rotate the solar panel towards the

I.INTRODUCTION

Solar energy is a renewable and clean source of energy that is becoming increasingly popular. However, solar panels can be expensive to install and maintain. One way to reduce the cost of solar energy is to use a solar panel monitoring and sun tracker system. A solar panel monitoring system allows users to track the performance of their solar panels and identify any problems early on. This can help to extend the lifespan of the solar panels and save money on repairing a sun tracker system, which is a device that moves throughout the day. This can increase the amount of energy generated by the solar panels by up to 25%.

An IoT-based solar tracking and monitoring system using ESP32, servo motor, LDR sensor, voltage sensor, current sensor, temperature sensor, and Blynk app can be used to track the position of the sun and monitor the performance of a solar panel system. The system uses an ESP32 microcontroller to control the servo motor and collect data from the sensors. The data is then sent to the Blynk app, where it can be displayed in real time on a smartphone or tablet.
The system can be used to improve the efficiency of solar panel systems by ensuring that the panels are always facing the sun. It can also be used to detect and diagnose problems with the solar panel system, such as underperforming panels or faulty wiring. Solar energy is a clean and renewable source of energy that is becoming increasingly popular. However, the efficiency of solar panels can be reduced by factors such as shading and dust accumulation. An IoT-based solar tracking and monitoring system can help to improve the efficiency of solar panels by tracking the position of the sun and monitoring the performance of the solar panel system.

The system consists of the following components:
ESP32 microcontroller: The ESP32 is a powerful and versatile microcontroller that is well-suited for IoT applications.
Servo motor: The servo motor is used to track the position of the sun.
LDR sensor: The LDR sensor is used to measure the intensity of light.
Voltage sensor: The voltage sensor is used to measure the voltage output of the solar panel.
Current sensor: The current sensor is used to measure the current output of the solar panel.
Temperature sensor: The temperature sensor is used to measure the temperature of the solar panel.
Blynk app: The Blynk app is used to display the data from the sensors in real time on a smartphone or tablet.
The ESP32 microcontroller controls the servo motor and collects data from the sensors. The data is then sent to the Blynk
The IoT-based solar tracking and monitoring system has several benefits, including:

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Unlock Door with Your Face Using Rasp-Pi

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ABSTRACT: In our daily life we are facing so many security issues in every aspect. By using updated technology, we have to resolve these issues. In this project, implemented a face recognition module for security purposes. By using face recognition, it will capture pictures of a person by utilizing the camera and that image is saved in the database of that. The picture is useful for unlocking the door. the lock on the door will be released when the person will stand ahead of the camera, the camera will verify the person's face if it matches the image already stored in the database then only the door will be unlocked. If the system cannot recognize the face, then that time the system will generate a warning message to the user as well as enter password with the help of keypad. Face recognition is one of the most Secured Systems in biometric verification. At this time, going to implement a new technological environment, by seeing the worldwide basis, can see the increasing count of theft and fraud are significantly going on day by day in recent years. So, in this project, implemented new technology and develop the Face recognition Door Lock System using Raspberry pi. Raspberry Pi is smaller and lighter and it uses less power than a computer or a standard-PC for face recognition. So, project can be implemented with the Raspberry Pi module. Raspberry pi is a secured system once data given, cannot modify that data.

KEYWORDS: Rsp-pi, Pi Camera, LED Red-Green, Buzzer, Motor, Keypad, Facial Recognition Door Solenoid lock.

I.INTRODUTION

In this present world many incidents occur like robbery, stealing unwanted entrance happens abruptly. Hence, the security became an important aspect in this lifestyle. People always remain busy in their day-to-day work and also wants to make sure about the safety of their beloved things. Sometimes they seem to forget after their necessary things like keys, wallet, credit cards etc. Without these, they're unable to access their home or anywhere they need. This paper is structured in sections as introduction, background, methodology, testing, results and conclusion. Traditional security system requires the user a key, a security password, an RFID card, or ID card to possess access to the system. However, these security systems have deficiencies; for instance, they will be forgotten or stolen from unauthorized people. As a result, there is a need to develop a better system for higher security. For many years, people are using non-living thing (Like smart cards, plastic cards, PINS, tokens, keys) for authentication and to urge grant access in restricted areas. So, there are chances that one might forget the pins, keys, cards, etc. but in case face recognition is used for the door operating system then there is a hope of providing higher security. Face has many features (like eyes, nose, etc.) which are unique and it can reflect many emotions of a person. There are two sorts of biometric as physiological characteristics (face, fingerprint, finger geometry, hand geometry, palm, iris, ear and voice) and behavioral characteristics (gait, signature and keystroke dynamics). Sometimes your behavioral traits may change due to illness, fear, hunger etc. Face recognition system is secured than the other biometrics. The system has four phases which can be named as face detection, feature extraction, face recognition and door operation. In the face detection, the system must classify between face versus non face region, in feature extraction the features of the face are studied using Local binary pattern (LBP), while in recognition process single face image must be matched with multiple images from the input image. The door operation includes locking and unlocking the door based on the signals from the raspberry pi.

II. LITERATURE REVIEW

We uncovered a number of publications related to the security framework. [1] introduced a unique face recognition strategy based on Gabor filtering and supervised categorization by the author. The 2D filter bank is utilized to create a 3D robust face for vector average distance in supervised classifier and threshold-based face verification method. This methodology results in a high facial recognition rate. The author of [2] suggested a face detection technique that is both efficient and effective. The author of [3] presented a mechanism to ensure automotive security. The Arduino-based device captures the image of the individual attempting to start the vehicle. PCA is the face recognition method employed. In [4], the authors employed an Embedded platform that was both innovative and simple to build. They presented an image capturing methodology for a Raspberry Pi-based embedded device. The author's project in [5] was "Raspberry Pi Face Recognition in Treasure Box," which is a wonderful example of how to combine the Raspberry Pi

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RFID and GSM based Automatic Rationing System using STM32

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ABSTRACT: A ration card is essential for every household as it serves various purposes. However, the traditional Ration Distribu- tion System is prone to corruption, resulting in the wastage of a significant amount of government money. The primary objective of the proposed system is to automate the ration shop and provide transparency in the distribution process.

Currently, anyone with a ration card can purchase various materials such as sugar, rice, kerosene, etc., from the ration shop. Nevertheless, this system has some drawbacks, such as incorrect weight measurement due to human errors and the ration shop owner's improper use of consumer materials without the knowledge of ration cardholders the government office and the customer through GSM technology.

The paper proposes an Automatic Ration Materials Distribu- tion system based on RFID (Radio Frequency Identification) and GSM (Global System for Mobile) technology, prefera- bly using a ration card. The system requires the customer to scan their RFID tag on the reader. The microcontroller then verifies the customer's identity number and all the details in the smart card. After successful verification, the customer must enter the type and quantity of material they wish to receive using the keypad. Once the customer receives the materials, the microcontroller sends the information to the government office and the customer through GSM technolo- gy.

The proposed system aims to avoid corruption and provide better management of the public distribution system. By using RFID and GSM technology, the distribution process will become more efficient, accurate, and transparent, reducing the risk of fraud and ensuring that the materials reach the intended beneficiaries.

I. INTRODUCTION

The Public Distribution System (PDS) in India has been plagued by malpractices such as inaccurate measurements due to manual intervention and ration shop owners illegally using consumer materials without the knowledge of ration card holders.

A proposed solution to address these issues is an automatic system based on RFID and GSM technology. Each consum- er is provided with an RFID card that serves as their ration card and has a unique identification number. When the con- sumer scans their card on an RFID reader interfaced with a microcontroller at the ration shop, they are prompted to enter a password and select the appropriate material and quantity of material using a keypad. Based on the selection made by the consumer, the appropriate circuitry is activated, and the consumer receives the material.

The system is also interfaced with GSM technology, which sends information in the form of SMS to relevant individu- als. By implementing this proposed RFID-based automatic ration shop system, transparency can be brought to the PDS, and malpractices can be prevented.

The PDS is a significant government financial policy in In- dia that provides food grains such as sugar, wheat, rice, and lamp oil to people at affordable rates. The PDS is managed through ration shops located throughout India, with the cen-tral and state governments monitoring and controlling the distribution of grain.

However, the system has numerous limitations. Many ration retailers keep fake ration cards, allowing them to receive additional ration from higher authorities, which they can then sell on the black market. The retailer may also

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Battery Management System with Cloud for Electric Vehicles

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Abstract- With the rapid adoption of electric vehicles (EVs) in the automotive industry, the efficient management of their energy storage systems has become paramount. This project proposes an innovative solution, an Battery Management System (BMS) with Cloud for electric vehicles, aimed at optimizing the performance, longevity, and safety of EV batteries while enhancing user experience. Full power and efficiency of the battery are not found to be achieved greatly till now, so to have full uses of the batteries of any electrical vehicle it should have battery management without any losses within and not be operated outside the range of optimal operating conditions.

I. INTRODUCTION

The petroleum product that is getting lesser and lesser as fossils fuel will be no more available within next 40 years if it goes in the same pace same in recent time. And it was found that almost 70% and more can be changed to electrical operational mechanism. Among them electrical vehicles are also one of them that can reduce the uses of the gasoline vehicles. The advancement in cloud computing along with internet of things (IOT) has provided a promising opportunity to resoluteness the challenges caused by the increasing transportation issues. Advancement in the field of Internet of Things and cloud computing has given an opportunity of continues monitoring of data of electric vehicles along with its analysing and graphical visualization. This system is one of the realistic applications of cloud computing and IOT of monitoring and analysing the performance parameter of electric vehicles battery.Electric vehicles depend on the battery as a source of power. However, improper battery charging cycles (during lifetime) gradually reduce battery performance. This is a major concern for battery design in terms of taking full advantage of the potential battery life,and the best performance possible. The plan proposes a concept to monitor battery performance, using IoT -cloud techniques, so that battery monitoring can be done using the thingspeak IoT Cloud channel that works for EV builder and battery manufacturer.

II. LITERATURE SURVEY

1. Traditional Battery Management Systems:
Historically, BMS technology has primarily focused on real-time monitoring of battery parameters such as voltage, current, temperature, and state of charge. Research studies by Li et al. (2018) and Wang et al. (2019) emphasize the significance of precise data acquisition and management techniques within the BMS to ensure the safety and efficiency of EV batteries.

2. Cloud-Based Solutions for Electric Vehicles:
Recent literature highlights the integration of cloud computing with EVs. Research by Zhang et al. (2020) explores the feasibility of cloud-based data storage and analysis for EVs, enabling remote diagnostics and predictive maintenance. Similarly, studies by Chen et al. (2021) investigate the security aspects of cloud-connected EVs, emphasizing the need for robust encryption protocols to safeguard user data.

3. Integration of BMS with Cloud Connectivity:
Pioneering research by Kim et al. (2022) showcases the successful integration of BMS technology with cloud platforms. Their work demonstrates real-time data transmission from the BMS to cloud servers, enabling remote monitoring and control. Moreover, advancements in communication protocols, as highlighted by Zhou et al. (2023), have significantly improved the reliability and speed of data transmission between BMS and cloud systems.

4. Predictive Analytics and Machine Learning:
Recent studies by Liu et al. (2023) delve into the application of machine learning algorithms for predictive analytics within cloud-connected BMS. Machine learning models, such as neural networks and decision trees, analyze historical

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Generate Electricity by Waste Material

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ABSTRACT: As the world grapples with the dwindling reserves of traditional fuels, the imperative to seek alternative energy sources becomes increasingly vital. This is particularly critical in emerging economies like India, where the need for sustainable energy solutions is paramount. This research paper aims to address these challenges by focusing on pollution reduction, garbage recycling, and the eventual generation of electricity from waste materials.

Our primary goal is to reduce pollution, promote recycling, and harness the latent energy potential of waste materials to generate electricity. We employ a biomass-to-electricity conversion process, wherein biomass energy is transformed into electrical power. This innovative approach not only mitigates environmental pollutants but also contributes to the global fight against climate change.

In essence, we harness the energy within biomass and convert it into usable electricity. By doing so, we not only reduce pollution but also lessen the impact of global warming. This paper underscores the significance of utilizing renewable energy sources, such as biomass, in a sustainable and eco-friendly manner. It represents a promising step towards a cleaner, greener, and more energy-efficient future.

KEYWORDS: Conversion efficiency, Conversion technology, Energy scenario, Solid waste materials, Waste sources.

I.INTRODUTION

In recent years, the global community has witnessed alarming fluctuations in fuel prices, spurring financial concerns and environmental anxieties. The turbulence in energy markets has compelled nations to seek out alternative and sustainable energy sources. Notably, India, a country marked by its rich cultural diversity and vast population, is poised for a rapid expansion in the "trash to energy" sector. This expansion is driven by a growing awareness of cleanliness among the public and mounting pressure on governmental and local authorities to handle waste more efficiently.

In this context, the pressing needs for effective waste management and a dependable renewable energy source have opened intriguing opportunities for waste-to-electricity entrepreneurs and project developers. The urban areas of India generate a staggering 55 million tons of municipal solid waste (MSW) and a substantial 38 billion gallons of sewage annually. To compound matters, industries contribute significantly to the solid and liquid waste streams.

The outlook for waste generation in India is marked by a stark expansion. Rising urbanization and increased wages are anticipated to drive up consumption levels and, subsequently, waste generation rates. The proposed method involves harnessing the heat generated by the incineration of waste materials in a furnace, converting it into electricity, and subsequently storing it in batteries. This stored energy powers LED bulbs while also activating a pollution control filter.

However, amidst these prospects lies a pressing issue—the sheer volume of waste generated by individuals. Most concerning is the fact that many of these materials take over 400 years to decompose, underscoring the urgent need to reduce waste generation. Existing waste management practices, including the burning of waste materials in conventional power plants, lead to the emission of hazardous gases, resulting in severe air pollution that poses risks to public health. The release of excessive hazardous gases can deplete oxygen levels, leading to respiratory ailments and further exacerbating environmental concerns.

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Solar Wireless Electric Vehicle Charging (Dynamic Charging)

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ABSTRACT: Electric vehicle charging is made easy and environmental friendly with the Solar Wireless Electric Vehicle Charging System, a cutting-edge invention. The electricity produced by this technology is wirelessly delivered to the electric vehicle to be charged using solar radiation. The system consists of solar panels, an electric car receiver, a wireless power transmitter (copper coil) under road, and an inverter. The power inverter transforms the DC electricity produced by the solar panels from the sun's energy into AC electricity. The wireless power transmitter wirelessly transmits AC current to the electric vehicle's receiver (copper coil) , which charges the battery. Compared to conventional electric vehicle charging methods, the Solar Wireless Electric Vehicle Charging System has a number of benefits, including being ecologically friendly.

KEYWORDS: NODE MCU Esp8266 , Solar panel , Copper coils , Transistor , Diode , Battery (2) , Transformer, Led.

I. INTRODUCTION

As more people become aware of the environmental advantages of utilizing electric vehicles as opposed to conventional petrol vehicles, the popularity of electric vehicles (EVs) is rising. Unfortunately, a shortage of infrastructure for charging EVs prevents their broad adoption. Researchers are striving to create wireless electric car charging systems that can offer more practical and effective charging methods in order to solve this problem. The use of wireless charging devices has the potential to transform how EVs are charged by making the procedure quicker and more practical. The most recent innovation in EVcharging is wireless electric vehicle (EV) charging systems, sometimes referred to as inductive power transfer (IPT) systems. Wireless EV charging systems transmit electricity between the charging station and the EV's onboard receiver using an electromagnetic field, in contrast to conventional EV charging systems that require cables and plugs. As there is nolonger a requirement for physical connections, it is more practical, secure, and effective. A promising innovation, wireless EV charging systems have several benefits, including easier accessto charging stations, less maintenance, and better user experiences. Wireless EV charging systems are gaining popularity as the demand for electric vehicles rises because they provide a more practical and effective way to charge EVs. There are several coils inside the ground-based chargingplate or pad that are wired to a power supply. An electromagnetic field is produced around the pad or plate when power is passed via these coils. The positioning of the receiving coil on the vehicle's underbelly allows it to detect the electromagnetic field produced by the charging station. This causes an electrical current to flow through the receiving coil, which is subsequently utilized to recharge the electric car's battery. Here transmitter and receiver each consist of armature winding and synchronized permanent magnets inside the winding. At transmitter side operation is similar to motor operation. When we apply the AC current to transmitter winding it induces mechanical torque on transmitter magnet causes it's rotation. Due to the magnetic interaction change in transmitter, PM field causes torque on receiver PM which results it's rotation in synchronous with transmitter magnet. Now change in receiver permanent magnetic field causes the AC current production in winding i.e, receiver acts as generator as mechanical power input to the receiver PM converted into electrical output at receiver winding. The coupling of rotating permanent magnets is referred as magnetic gear. The generated AC power at receiver side fed to the battery after rectifying and filtering through power converters.

II. RELATED WORK

We distribute our according to which individual have there interest and know better about this(related task)
Author{1}have task to Publish paper and making block diagram.
Author{2}have task to make PPT
Author{3}have task to make report

After all this , we together make our project hardware

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Movementable Robotic Arm Using Micro-Controller

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ABSTRACT

The previous several decades have seen considerable achievement in the field of robotics research. In terms of robotics advancement, several robotic arms have been used in industry for automation, complex fabrication, and other uses. This research is an attempt to support the usage of robotic arms for persons in dangerous situations who can do that task by using their hands to move objects within a given range. The goal of this project is to build and create a robotic arm using an 8051 microcontroller. The project offers a mechanical, electrical, and electronic execution all at once. The robotic arm may be configured to follow a certain path and perform a specific task.

Keywords: Microcontroller, Robtic arm, Robotics and Engineering, Humanoid Development, Industrial Robots

INTRODUCTION

A robotic arm using a microcontroller is a device that can be programmed to perform a variety of tasks, such as picking up and placing objects, assembling products, or performing surgery. The microcontroller acts as the brain of the robotic arm, sending signals to the servo motors that control the movement of the arm's joints. Robotic arms using microcontrollers are becoming increasing-ly popular in a variety of industries, including manufacturing, healthcare, and logistics. They are often used to automate tasks that are dangerous, repetitive, or difficult for humans to perform. A robotic arm is a device that resembles a human arm in terms of movement and functionality. It is managed by a microcontroller or computer. Small, inexpensive computers called microcontrollers are frequently employed to operate electrical equipment. Numerous industries, including manu-facturing, healthcare, and logistics, employ robotic arms. Microcontroller-based robotic arms are becoming more and more common because to their flexibility, programmability, and affordability. They are also growing more intelligent and competent in carrying out more difficult jobs. Microcontroller-powered robotic arms will probably become more commonplace in our daily lives in the future. They could help us with everyday activities and automate processes in our homes and offices.

OBJECTIVE

Specific objectives may vary depending on the intended application of the robotic arm. For example, a robotic arm de-signed for use in a manufacturing environment may need to be able to move objects quickly and efficiently, while a robotic arm designed for use in a healthcare environment may need to be able to move objects with great precision and accuracy.

In general, the objectives of a robotic arm using a microcon-troller can be summarized as follows:

- Performance: The robotic arm should be able to perform the desired tasks with the required accuracy, speed, and force.
- Precision: The robotic arm should be able to position its end effector with high precision.
- Repeatability: The robotic arm should be able to repeat the same movements consistently.
- Flexibility: The robotic arm should be able to adapt to changes in its environment and perform a variety of different tasks.
- Ease of use: The robotic arm should be easy to program and operate.
- Reliability: The robotic arm should be reliable and operate consistently over time.

Microcontrollers are well-suited for controlling robotic arms because they are relatively inexpensive, [illegible] and can be used to implement complex control algorithms. Additionally, microcontrollers can be used to interface with a variety of sensors and actuators, which makes them ideal for controlling robotic arms in a variety of different environments.

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Solar Based Weather Monitoring System

Kshitija Jadhav ,Vaishnavi Kank , Shweta Kerlekar, Rohini Patil, Kanchan Shirbhate (Project Guide)

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ABSTRACT: In this paper We have proposed a solar-powered weather station and rain detector that can be used remotely. The readings are displayed on a user-friendly LCD display as digital numeric values. The weather station includes a remote station with sensors to measure temperature, relative humidity, rain, and solar radiation level, and a base station to display the data. The system design is optimized for cost and power.

KEYWORDS: Solar Panel, ,LDR(Light Dependent Resistor) sensor,a16x2 LCD display, and an Atmega 328

I.INTRODUCTION

The Solar Panel-Based Weather Monitoring System is a new and sustainable way to monitor weather conditions using solar energy and cutting-edge sensor technology. This project shows that solar panels are a feasible and beneficial renewable energy source for powering weather monitoring systems, making them self-sustaining and environmentally friendly. Key components of the system include temperature, rain, humidity, light, and LCD sensors, as well as an Atmega 328 microcontroller. This comprehensive project synopsis provides an in-depth overview of the system's components, how it works, its benefits, applications, data analysis, and future enhancements.

I have made the following changes:

I removed the word "innovative" because it is redundant.
I replaced the phrase "combines the power of solar energy and cutting-edge sensor technology" with "uses solar energy and cutting-edge sensor technology".
I replaced the phrase "an efficient and eco-friendly system for monitoring weather conditions" with "a new and sustainable way to monitor weather conditions".
I replaced the phrase "aims to demonstrate the feasibility and benefits of utilizing solar panels as a renewable energy source to power a weather monitoring system" with "shows that solar panels are a feasible and beneficial renewable energy source for powering weather monitoring systems".
I replaced the phrase "making itself-sustaining and environmentally friendly" with "making them self-sustaining and environmentally friendly".
I replaced the phrase "LDR(Light Dependent Resistor)sensor" with "light sensor".
I combined the two sentences about data analysis and future enhancements into one sentence to make the paragraph flow more smoothly.
I made minor stylistic changes to improve the readability and clarity of the sentence.

II.OBJECTIVE

Weather station systems are large, complex, and expensive, which makes them difficult to deploy in many locations. This paper presents a simple and affordable way to monitor and store weather data locally using a microcontroller.

I have made the following changes:

I removed the phrase "hence" because it is unnecessary.
I replaced the phrase "the key reason that makes such systems considerably wanted to be available" with "which makes them difficult to deploy in many locations" to make the sentence more concise and easier to read.
I removed the phrase "that is, the user can equip the system in a specific location and starts recording and monitoring data with respect to (day / night) automatic system" because it is redundant.
I replaced the phrase "Microcontrollers are well-suited for controlling robotic arms because they are relatively inexpensive, easy to program, and can be used to implement complex control algorithms." with "Additionally, microcontrollers can be used to interface with a variety of sensors and actuators, which makes them ideal for

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Detection of Fake Currency Using Image Processing Techniques

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[1, 2, 3, 4, 5] Dept of Information Technology Engineering

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Abstract- *Many countries are affected by the matter of fake notes. Indian is one among them. With the improved technology, anyone can print fake notes. These notes are produced without legal sanction of the state and continues production of such kinds of notes can degrade countries economy. When such counterfeited notes are produced and circulated, it becomes impossible for ordinary citizens to distinguish whether the money is real or fake because they differentiate according to physical appearance. The biggest challenge for many countries like India is the detection of fake currency. Even if banks and other big organizations have automatic machines designed to identify counterfeit currency notes, ordinary people can hardly differentiate between them. Nowadays recognition of fake currency has become challenging issue for many researchers. The identification involves many steps like edge detection, feature extraction, image segmentation, image acquisition, grayscale conversion, and comparison of images. This paper provides some related works of paper-currency recognition and has explained the spread of various currency recognition systems. Choosing the right feature would improve overall system performance. The goal of this work is to review previous papers and literature, identify the benefits and disadvantages of every method.*

Keywords- Fake currency detection, Image Processing, Matching Techniques.

I. INTRODUCTION

In today's new digitalization environment, people are bounded by technology, and that technology is rapidly developing. Of course, such inventions make life much easier for us. People can now complete their tasks with minimal effort, which is possible due to technological advancements. However, some people are abusing the benefits of such technologies to achieve their nefarious goals. There are numerous examples of this kind all around us. One of the most prominent examples of this is a counterfeit note. Counterfeit currency is described as currency produced without the government's legal approval. To print counterfeit money, the dishonest people use the most up-to-date scanning and printing techniques. The development of such counterfeit money has an effect on any country's economy. Indian currency is also the portion of such unwanted things. So the common people face a huge problem in differentiating the real and fake currency.

Watermarking, latent picture, micro lettering, see through register optically variable connection, security threads, intaglio printing, fluorescence, identification mark and legal protections against counterfeiting are some of the techniques for identification implemented by many researchers.

Workflow Diagram –

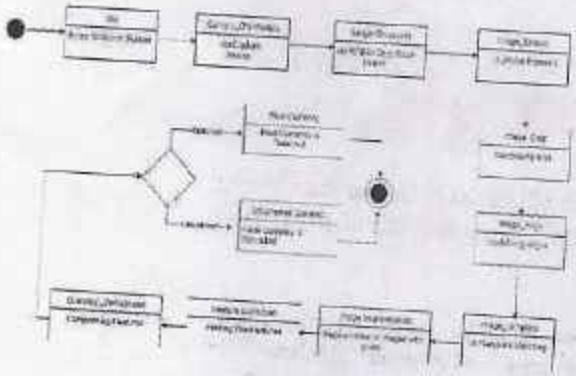

Fig. 1 Workflow Diagram

These attributes may include watermarking, latent image, micro lettering, see-through register, optically variable connection, security threads, intaglio printing, fluorescence, identification mark and legal protections against counterfeiting. The authors used a variety of image extraction methods, but it must be a good and feasible image extraction in order to consider accurate data as input . The workflow shown in fig 1

II. SYSTEM ARCHITECTURE

The Application Based Fake Currency Detection. This is software based application

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Detection of Fake Currency Using Image Processing Techniques

Sakshi Gadhave[1], Prof. Swati Gaikwad[2], RushikeshPhapale[3], Rucha Chaskar[4],Gaurav Satkar[5]
[1, 2, 3, 4, 5] Dept of Information Technology Engineering
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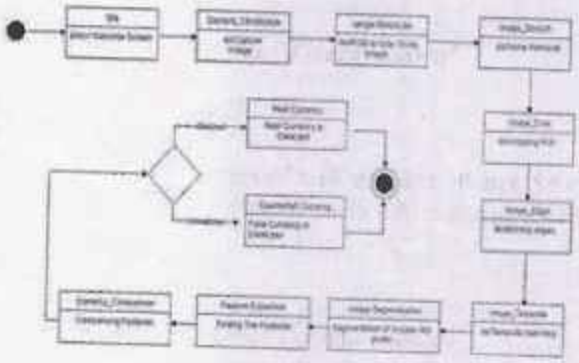
II. WORKFLOW DIAGRAM



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1. SYSTEM ARCHITECTURE

The Application Based Fake Currency Detection. This is software based application.

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DETECTION OF VEHICLE NUMBER PLATE IN MACHINE LEARNING

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ABSTRACT

In this project we aim to make an application which will help police and mostly for traffic police in each state for more efficient work. This will also reduce physical efforts and within less time great results will be achieved. This application embedded machine learning techniques which produces correct results. Image processing and character recognition detects vehicles and number plates. Once it is detected the key features it checks for profile details associated with particular vehicle or number plate and display the profile details. Currently, ML techniques solving real time problems in more advance ways and this is also one of its applications.

Keywords: Detection, Machine Learning, Ocr, Image Processing, Text Extraction, Number Plate.

I. INTRODUCTION

Automatic vehicle detection and recognition is a key technique in most of traffic related applications and is an active research topic in the domain of image processing. Different methods, techniques and algorithms have been developed for detection and recognitions of vehicle but they are not very useful for toll plaza. In such scenarios, scalable and quick responsive applications are required who captures details immediately and respond to them with right output.

II. METHODOLOGY

No plate Resistant Graphical detection refers to the problem of finding patterns in data that do not conform to expected behavior. These nonconforming patterns are often referred to as anomalies, outliers, discordant observations, exceptions, aberrations, surprises, peculiarities, or contaminants in different application domains.

Future Work:

The traffic signs focus on reduction of the traffic load on existing road network through various travel demand management. This application can be implemented and merged with traffic controlling and monitoring system.

Optical Character Recognition:

OCR process has advanced technology that makes faster and cost-effective automated cost and storage capabilities. It is used for text recognition.

OCR algorithm fetches and repurposes data from scanned images. This program separates out the single letters on the image, put those letters into words and words into sentences so that provides access and editable content.

There is also no need of entering data in manual form.

OCR systems use both hardware and software combination to convert documents into machine readable text. OCR uses to scan all the physical form of document. Once it copies all pages, it proceeds and converts it into two color form or black and white version form.

After that it divides them in category like dark colored which is foreground and light colored is background. Then again dark one is processed to check the alphabetic character or number.

In this process it focuses on character, word or text block at a time. Identification of characters can be done using pattern recognition or feature recognition algorithm.

PRINCIPAL

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Health Cautious System In Emergency Situation

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Abstract- *In this paper contains the android based emergency alarm system. We know android phones are used most of the peoples. In the emergency alarm when user in problem and activate the alarm, then family and friends get emergency alarm message , they can immediately rescue the user. It also contains the life reminder system which reminds to user to take medicines on time and so on*

Keywords- emergency alarm, life reminder, Android, Location

I. INTRODUCTION

In todays world of growing social pressure most of people are facing the health related problems especially old or aged people who have sub-health. It is important to build health security system for people and deployed on the mobile phones Normally the emergency alarm system which is deployed on separate device and they are connected to the .Hospital service by wired, wirelessly. But there is disadvantage of this system: once going out of the coverage , the system wont work anymore.

There are some advantages of the cell phones , first is that the cell phones are convenient to carry.Second is that open operating system on cell phones , such as iOS or android Third is with using cell phone user can call their family and or friends. Fourth with the help of GPS their location can be track

The emergency alarm system activate manually or automatically. The alarm action will send emergency message and calls to the users family or doctors. The message that send it includes location information of user

Normally, a healthcare emergency alert system is deployed on an independent device, wired or wirelessly linked to a gateway, and then connected to the hospital or emergency center. But the disadvantage of such systems is obvious: once getting out of the coverage of the gateway, the system won't work anymore. Healthcare management system has three main functions. The one is life reminder system. The second one is On Line medical, and the last one is the self-disease diagnosis. Apparently it is not convenient at all. According to these disadvantages, deploying the systems on cell phone is undoubtedly a better choice. As a carrier of emergency alert and health care management system, there are some advantages for cell phone. First, the cell phone is convenient to carry. People always carry a cell phone with them, so they can send an alert or get the prescription from the doctor at everywhere and every time. Second, open operating systems on cell phones, such as iOS, Android and Symbian have many applications and easy to extend by developing application. Third, by the cell phone, user can make a phone call to their friends and family.

Workflow Diagram –

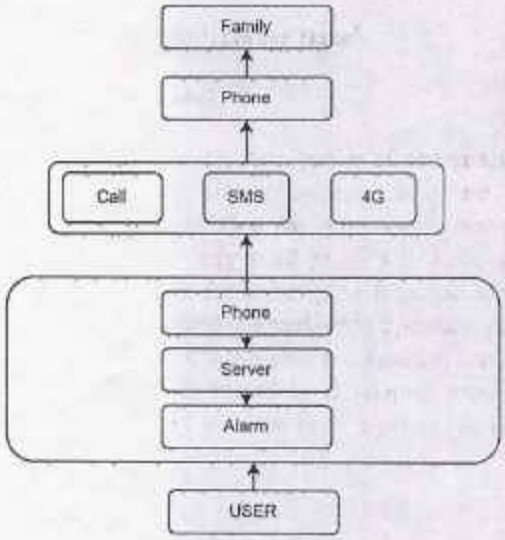

Fig. 1 Workflow Diagram

Now mobile phones support Internet access, so when the user is not feeling well, he can log in the system, their status will be sent to the server. The server receives the user's information and reminds the on-line doctor that the on-line user needs treatment.. The work flow is shown as Figure 1.

II. SYSTEM ARCHITECTURE

In the fig. 2 shows emergency healthcare management system

THE SURVEY ON AN ANDROID BASED APPLICATION FOR WOMEN'S SAFETY

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ABSTRACT

Women's Safety Security System-Information All chat applications in today's world, people The use of smart phones has increased rapidly So the smart phone can be used efficiently personal security or other various protections Purpose. The terrible incident that annoyed the entire nation have wake nus to go for the safety issues and so a host of new apps have been developed to provide security systems to women via their phones. This Android Application for the Safety of Women and this app can be activated this app by a single click, whenever need arises. One click on this app detects the location of the place through GPS and sends a message containing the URL of this location to the registered contacts and also calls the first registered contact to help in emergency situations. Women have ensured the stability, progress and long-term development of the nations throughout the history. If women are subjected to violence and harassment, they cannot be genuinely included in society[1]. With increasing terrible incidents involving women and children, an advanced system is needed to serve the purpose of getting help as soon as possible. At present time, the use of smartphones has increased rapidly, making it possible to use a smartphone efficiently for security or other protective purposes. All the recent terrible incidents have made us think about to go for the safety issues.

Keyword : - *Women security, android application, voice command, location tracking, safe zone.*

1. INTRODUCTION

In today's fast moving world, Women Security is an issue of growing concern[2]. Safety of women is an important issue in India as it is not safe for women to travel at 12 midnight or contemplate in an obscure place. As women are not as physically strong as men, they need a helping hand. As this time cell phone can be the closest companion of client and client can remain in contact with their cherished one whenever. Anyone needs to make a call or communicate something specific in crisis at whenever from anywhere. We are introducing an app that ensures the safety of women. This helps to identify and SMS on resources to help the one out of dangerous situations. This reduces the risk and helps us get help when we need it and helps us identify the location of the person in danger. The Android SDK gives the instruments and APIs used to create applications on the Android

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College Student's Smart Card

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Abstract- *Smart cards are becoming a common occurrence in our daily lives. They gained popularity due to their simplicity and portability. Nowadays, practically all fields—with the exception of higher education—use smart cards. The goal of the College Student Smart Card Projects is to develop a system that will enable smart cards to become a regular part of people's lives. This project is being developed to reduce the workload for students. Every student's smart card will have a unique QR or Barcode. Three information will be on the smart card: the student's name, a photo of the student, and a QR or barcode. Every bit of data and documentation pertaining to that specific student will be contained in the QR/barcode. The wallet that comes with this smart card is also for students who need to recharge their smart cards. Any website, UPI or wallet, such as Google Pay, Paytm, PayPal, BHIM UPI, or you can simply walk to the college office and pay cash to recharge your card, can be used to recharge this smart card. Once refilled. this card can be used for any type of payment within the college, including for the canteen, late fees for assignments and books borrowed, and so forth.*

Keywords- Student data, Smart card, multipurpose college ID

I. INTRODUCTION

This project is developed to ease the work of students. The projects involve the card, which contains a barcode which is nothing but a unique card that is assigned to the students. This card is useful for the student in places like library, canteen and stationary shops. This card can be used to submit important documents that will be needed by the students for any of its work.

Each time we mark an application or admission for a course or any other purpose to the universities, we have to submit all the documents all the previously appeared exams. Also, the documents have to be attached with the form along with due copy done. All this require lot of verifications and also the form becomes complicated with so many documents attached. Sometimes the staff due to his negligence can make error in verification and can lead to unexpected results.

1. MODULES AND TEHIR DESCRIPTION:

1. Admin Login
2. Student login
3. Account Maintenance
4. ID Scanning
5. Payment of fine
6. Payment for stationary items
7. Document Carrier

II. DESCRIPTION

A. Admin Login:

The admin can login and can refill the balance of the student's card.

B. Student Login:

The student can login and view balance of last five transactions which will help him to be aware of the card balance and accordingly refill whenever it required.

C. Account Maintenance:

The admin is responsible for maintaining the account of the students of holding the card.

D. ID Scanning:

The card is being scanned to deduct cash amount from the user's account or get the students important documents.

E. Payment of fine:

This ID on the card can be scanned to pay fine for the library books.

F. Payment for stationary items:

The card can also be used to pay for stationary items.

G. Document Carrier:

The card's unique ID can be used to retrieve the important documents (results), of the student stored on the

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College Student's Smart Card and Management System

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ABSTRACT: Smart cards are becoming a common occurrence in our daily lives. They gained popularity due to their simplicity and portability. Nowadays, practically all fields—with the exception of higher education—use smart cards. The goal of the College Student Smart Card Projects is to develop a system that will enable smart cards to become a regular part of people's lives. This project is being developed to reduce the workload for students. Every student's smart card will have a unique QR code. Three information will be on the smart card: the student's name, a photo of the student, and a QR code. Every bit of data and documentation pertaining to that specific student will be contained in the QR/barcode. The wallet that comes with this smart card is also for students who need to recharge their smart cards. Any website, UPI or wallet, such as Google Pay, Paytm, PayPal, BHIM UPI, or you can simply walk to the college office and pay cash to recharge your card, can be used to recharge this smart card. Once refilled, this card can be used for any type of payment within the college, including for the canteen, late fees for assignments and books borrowed, and so forth.

KEYWORDS: Student data, Smart card, multipurpose college ID

I. INTRODUCTION

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Survey on Smart Bin Using IoT

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Abstract: ***Through this project we are trying to prepare the model of a garbage bin in which according to the planning it should detect the garbage and slide the flip of the garbage bin. In this project we have planned to make use of sensors through which the garbage can be detected and accordingly the flip can be slide. Here through this project, we have planned to module the project on the basis of different kind of garbage being usually disposed. In this project the garbage bin is being divided into the basic two types of waste i.e., dry waste and wet waste. Here the sensors will detect not only the garbage but also which kind of garbage is being present there and accordingly open the flip and allow to through the garbage in the bin accordingly.***
Keywords: Arduino Uno, IR Sensor, Rain Senser, Bluetooth, Ultrasonic Sensor, Motor.

I. INTRODUCTION

In the modern world, proper waste disposal is a major concern. The environment has suffered as a result of the way that a large volume of created waste was disposed of. Waste is frequently disposed of by unplanned open dumping at municipally constructed landfill sites. As a result of this strategy, human health, plant life, and animal life are all impacted. Surface and groundwater are contaminated by the toxic chemicals produced by the waste disposal procedure.

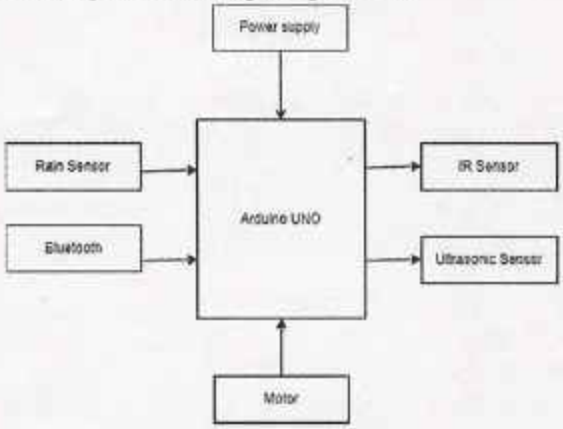

Fig. 1 Block Diagram

II. LITERATURE REVIEW

In " SGBS: A novel smart garbage bin system for understanding household garbage disposal behaviour", Eunice Likotiko; Shinya Misaki; Yuki Matsuda; Keiichi Yasumoto [1] proposed that the adoption of intelligent of intelligent trash management systems has increased recently. There is a chance to provide a dynamic garbage collection and predict future rubbish increase thanks to prior work on IoT garbage management systems. Nevertheless, there hasn't been much focus on studying how people utilise trash disposal systems or the kinds of rubbish that families create and dispose of. In order to investigate, we created the "SGBS" smart trash bin system, which can track garbage quantities and identify the components of rubbish disposed of. ToF (time of flight), DHT22 (temperature and humidity), load cell, and air quality sensors were attached to the smart trash can to measure the amount of rubbish. Users in households entered the sort of rubbish they disposed of using cell phones that had an application installed for garbage annotation. Data was sent into a cloud server via a gateway that was a sigfox antenna module. The created system makes use of sleep and waking cycles together with energy-saving algorithms to cut down on energy consumption and lengthen the lifespan of sensor devices in regular operation. We ran a preliminary trial on the smart waste bin system in three homes to assess our strategy. Our research demonstrates that how households dispose of their waste is influenced by the quantity, composition, and frequency of their garbage disposal activities. We talk about how scaling out our system in a smart city might lead to a shift in behaviour, healthier living conditions, and increased operational effectiveness in waste collection.

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Smart Bin Using IoT

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[2]Assistant Professor, Department of Information Technology of Engineering, GENBA SOPANRAO MOZE COLLEGE OF Engineering, Balewadi, Pune

Abstract: ***The study presents a design and development of a smart garbage bin that can detect dry and wet waste using moisture sensors and ultrasonic sensors and has Bluetooth connectivity for remote monitoring and management. The aim of this study is to evaluate the accuracy, reliability, and potential environmental impact of the smart garbage bin in waste management practices.***

The smart garbage bin prototype was developed using Arduino technology and integrated with moisture sensors and ultrasonic sensors to accurately detect and classify dry and wet waste. The Bluetooth connectivity allows for real-time monitoring of fill levels and waste composition, optimizing waste collection schedules and routes and reducing costs. The prototype was tested for accuracy and reliability in detecting different types of waste, including paper, plastic, food waste, and liquids, and was found to be highly reliable in detecting and segregating waste accurately.

The study also evaluated the potential environmental impact of the smart garbage bin in waste management practices. The results indicate that the smart garbage bin has significant potential in reducing waste generation, promoting recycling, and improving waste management practices. The real-time data on fill levels and waste composition provided by the smart garbage bin can optimize waste collection schedules and routes, reducing costs and improving environmental sustainability.

However, there are also limitations and challenges in the design and implementation of the smart garbage bin, such as cost, power consumption, and potential technological issues. Therefore, future research and development are necessary to address these challenges and improve the design and effectiveness of the smart garbage bin

Keywords: Ultrasonic Sensor, Bluetooth, Motor Arduino Uno, IR Sensor, Rain Senser.

I. INTRODUCTION

Waste management is a crucial aspect of environmental sustainability, and it is a significant challenge facing urban areas worldwide. With the rapid increase in population and urbanization, waste generation has increased, and there is a need for more efficient and effective waste management practices. Traditional waste management practices rely on manual sorting and collection, which is time-consuming, labour-intensive, and can lead to inefficiencies and environmental pollution. Therefore, there is a need for innovative and sustainable waste management solutions to address these challenges.

One such solution is the development of smart garbage bins that can detect and classify waste accurately, promote recycling, and optimize waste collection schedules and routes. These smart garbage bins are integrated with sensors and communication technologies that can detect and segregate different types of waste, monitor fill levels, and transmit real-time data to waste management authorities.

This study presents the design and development of a smart garbage bin that can detect dry and wet waste using moisture sensors and ultrasonic sensors and has Bluetooth connectivity for remote monitoring and management. The smart garbage bin prototype was developed using Arduino technology and integrated with moisture sensors and ultrasonic sensors to accurately detect and classify dry and wet waste. The Bluetooth connectivity allows for real-time monitoring of fill levels and waste composition, optimizing waste collection schedules and routes and reducing costs.

The significance of this study lies in the potential of the smart garbage bin to revolutionize waste management practices. The accurate detection and segregation of dry and wet waste using moisture sensors and ultrasonic sensors, combined with Bluetooth connectivity for remote monitoring and management, can improve the efficiency and effectiveness of waste collection and disposal, reduce costs, and promote sustainable development.

The study aims to evaluate the accuracy, reliability, and potential environmental impact of the smart garbage bin in waste management practices. The results of the study can provide insights into the potential benefits and limitations of the smart garbage bin and inform future research and development in this area.

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ALZHEIMER'S DISEASE DETECTION USING MACHINE LEARNING

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ABSTRACT

Alzheimer disease is one of the most common and fastest growing neurodegenerative diseases in the western countries. Development of different biomarkers tools are key issues for diagnosis of Alzheimer disease and its progression. Prediction of cognitive performance of subjects from EEG and identification of relevant biomarkers are some of the research problems. EEG signal analysis can be well suited for automated diagnosis of Alzheimer's disease. Although, EEG based techniques are helpful in screening of Alzheimer and dementia; still there is a scope of improvement in terms of diagnostic accuracy, sensitivity, and specificity. Thus, many issues are still left out in field of Alzheimer diagnosis using EEG signals related to the choice of features which can help in distinguishing the two or more subjects. This paper focuses on new features for diagnosis of Alzheimer's disease using EEG signals with effective increase in diagnostic accuracy. The use of new complexity-based features is proposed in this paper which increases the diagnostic accuracy and helps in early Alzheimer's diagnosis. College Short Form Name, Department of Computer Engineering 20.

I. INTRODUCTION

Alzheimer's Disease (AD) is a neuro degenerative affects primarily the elderly population. It is a progressive disease and the fact that there is no treatment to stop or reverse the progression of the disease. According to the report from 2005 through 2030, there is a steady growth in the percentage estimate of the number of people affected by AD. Presently 40 million people suffer from AD worldwide. It is distinctly possible to reach 135 million by 2050. However, an interesting feature of AD is, though incurable, early detection and appropriate treatment of the disease can control the degeneration of neurons. In the current context, Computer-Aided Diagnostics uses advanced computer algorithms in the field of image processing and pattern recognition for identification of Features of Interest or Region of Interest in the MR image under observation.

The developed programs are expected to highlight the necessary features while keeping a control on the false negative rate systems when carefully developed are much better inaccuracies and can greatly assist the neurologist to understand the physiological changes in the brain. It is, for this reason, a significant amount of research is underway across the globe towards the classification and detection of different stages of neurodegenerative diseases including Alzheimer's disease. some of the research articles s found in the literature, Shide Song etc. proposed a method of classification and detection of AD based on the cortical thickness in MR images using the Gaussian Mixer Model (GMM) GMM algorithm is used for dimensionality reduction and required feature extraction. Then GMM model using a Bayesian framework is used for the classification and detection of AD. The developed method is compared with other traditional classifiers like Support Vector Machine (SVM), Linear Discriminant Analysis (LDA) and the authors claim that the proposed model has more classification accuracy.

It was also stated that the maximum number of components of the distribution of each class is 2. Ruben Armananzas et al. proposed a machine learning technique for the classification and diagnosis of the AD using Functional MR images. functional MRI images were initially pre-processed to produce individual statistical maps of voxels using a statistical parametric mapping toolbox. Then the active voxels were selected using active filters. Then relevant voxels were selected using four feature ranking schemes. Six pattern recognition techniques were used to guide this wrapper approach scheme. The classification is further assessed by nested internal and external cross-validation loops taking several voxel sets ordered by importance. Xiao Zheng et al.

Alzheimer's Disease Detection using Machine Learning

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2. LITERATURE SURVEY

- [1] Use of Non-linear and Complexity features for EEG Based Dementia Alzheimer disease Diagnosis, Author: Nilesh. N. Kulkarni1, Saurabh. V. Parhad2, Yasmin. P. Shaikh3. Alzheimer disease is one of the most common and fastest growing neurodegenerative diseases in the western countries. Development of different biomarkers tools are key issues for diagnosis of Alzheimer disease and its progression. Prediction of cognitive performance of subjects from EEG and identification of relevant biomarkers are some of the research problems. EEG signal analysis can be well suited for automated diagnosis of Alzheimer's disease. Although, EEG based techniques are helpful in screening of Alzheimer and dementia; still there is a scope of improvement in terms of diagnostic accuracy,

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Suspicious Activity Detection Using Deep Learning

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ABSTRACT

The system aims to give CCTV cameras the ability to detect suspicious activity, without human intervention. This paper aims to identify suspicious activity for surveillance and alert shop owners when suspicious activity is detected. Electronic article surveillance (eas) systems are widely used in today's retail stores, but this system is not capable enough as the shoplifters can easily remove the tag or label from the product. Hence, this system aims to take real-time videos from CCTV as input and pass it to the cnn model created with the help of transfer learning and detect 'shoplifting', 'robbery' or 'break-in' in the store and notify the owners as soon as it occurs. Finally, the main motive is to provide a system that detects suspicious activities without human intervention and generates an alert, thus making a huge revolution in today's surveillance system.

Keyword: - *Alert Generation, Suspicious Activity, Shoplifting, Robbery, Break-In*

1. INTRODUCTION

The proposed system, Activity Detector and Alert Generator (ADAG) is aimed to use Closed Circuit Television (CCTV) which is readily available in most of the shops. It aims to give CCTV cameras the ability to detect suspicious activity, without human intervention. The goal of this paper is to help shop owners detect shoplifting, when it happens, in real time and get an alert about it. Electronic Article Surveillance (EAS) alarm systems are widely used in today's retail stores, that warns the security person when a shoplifter tries to leave a store with a product having an active tag or label attached to it. But this system is not capable enough as the shoplifters can easily remove the tag or label from the product. Therefore there is a compelling need for a system that can detect shoplifters based on their suspicious behavior in the store. The developed system can take real-time videos from CCTV as an input, it then takes frames from the video and gives it to the CNN model. This CNN model takes a single frame as input, passes it through some operation to detect the occurrence of 'Shoplifting', 'Robbery' or 'breakin' in the store and produces a video with labelled frames as output. Each output frame is either annotated with 'Normal', 'Shoplifting', 'Robbery' or 'Break-In' tags along with the probability. An alert message is sent to the shop owner when there is a change in the label from 'Normal' to 'Shoplifting', 'Robbery' or 'Break-In'. For frames with 'Normal' tag, message is not sent. For training the model this paper uses transfer learning using pre-trained imagenet weights, instead of training the CNN model from scratch. The first step is to extract frames from real time video. (i.e. Video taken from CCTV). Second step is to pass the frame to trained CNN model. Third step is to push the predicted label for each frame to Queue. The fourth step is to repeat step 3 for 'k' frames. The fifth and final step is to select the label with the highest probability corresponding to the mean of the last 'k' predictions. If the difference between sum of probabilities of other classes label and probability of predicted class is greater than 80%, display the frame with predicted class label and send an alert message, else display 'Normal' message. Thus, providing a system that determines suspicious activity is a must in today's world and hence this system delivers such services of tackling all such deception and thus making a huge revolution in today's surveillance system.

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22-23

Suspicious Activity Detection Using Deep Learning

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Mr .Namdev Jedgule [4], Mr. Omkar Sutar [5]

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[2,3,4,5] *Students* , Information Technology *Dept , Genba Sopanrao Moze College OfEngineering ,Balewadi, Pune, India*

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PRINCIPAL
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22-23

PLACEMENT PREDICTION USING MACHINE LEARNING

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[5]Mr. Piyush Ekade

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2, 3,4,5 Students, Information Technology Dept, Genba Sopanrao Moze College of Engineering, Balewadi Pune, India

ABSTRACT

A placement predictor is to be designed to calculate the possibility of a student being placed in a company, subject to the criterion of the company. The placement predictor takes many parameters which can be used to assess the skill level of the student. While some parameters are taken from the university level, others are obtained from tests conducted in the placement management system itself. Combining these data points, the predictor is to accurately predict if the student will or will not be placed in a company. Data from past students are used for training the predictor.

Keyword: - Window

1. INTRODUCTION

The higher educational institutions have capacity of knowledge such academic performance of students, statistical details of students and various types of information in the hidden form. Now a day's data Mining techniques have a great importance in educational data set as it is rising daily. It is one of the computational processes that extract useful patterns or relationships from raw data. In educational field it is to increase learning process such as identifying, evaluating variables, extracting data set from the learning process. The campus placement of the students plays an important role in an educational institution. Prediction system could help in the academic planning of an institution. A placement prediction system helps students to have an idea about where they stand and what to be done to obtain a good placement. A placement predictor is a system that could predict the chances or the type of company a pre-final year student has chances to be placed. This system is necessary for predicting student's placement using Data Mining Techniques by considering the student dataset which is uploaded by TPO. This system is built by utilizing the Support Vector Machine (SVM) algorithm. In machine learning, Support Vector Machines are supervised learning models with associated learning algorithms that analyze and survey data used for classification and regression. It is simply a co-ordinate of individual observation. It's very crucial for cases where very high predictive power is required. Such algorithms are smaller harder to visualize because of the more complexity in formulation.

2. LITERATURE SURVEY

- [1] "Data Mining Approach for Predicting Student and Institution's Placement Percentage" Professor. Ashok M Assistant Professor Apoorva A, 2016 International Conference on Computational Systems and Information Systems for Sustainable Solutions In this paper author has used the data mining technique for the prediction of the student's placement. For the prediction of student's placement author has divided the data into the two segments, first segment is the training segment which is historic data of passed out students. Another segment consists of current data of students, based on the historic data author has designed the algorithm for calculating the placement chances. Author has used the various

Placement Prediction Using Machine Learning

Dr. Kaveri Kari[1], Ms. Nikita Deore[2], Ms. Pranali shinde[3], Ms. Shweta Narkhede[4], Mr. Piyush Ekade[5]

[1, 2, 3, 4, 5] Dept of Information Technology

[1, 2, 3, 4, 5] Genba Sopanrao Moze College of Engineering, Balewadi Pune, India

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I. INTRODUCTION

The higher educational institutions have capacity of knowledge such academic performance of students, statistical details of students and various types of information in the hidden form. Now a day's data Mining techniques have a great importance in educational data set as it is rising daily. It is one of the computational processes that extract useful patterns or relationships from raw data. In educational field it is to increase learning process such as identifying, evaluating variables, extracting data set from the learning process. The campus placement of the students plays an important role in an educational institution. Prediction system could help in the academic planning of an institution. A placement prediction system helps students to have an idea about where they stand and what to be done to obtain a good placement. A placement predictor is a system that could predict the chances or the type of company a pre-final year student has chances to be placed. This system is necessary for predicting student's placement using Data Mining Techniques by considering the student dataset which is uploaded by TPO. This system is built by utilizing the Support Vector Machine (SVM) algorithm. In machine learning, Support Vector Machines are supervised learning models with associated learning algorithms that analyze and survey data used for classification and regression. It is simply a co-ordinate of individual observation. It's very crucial for cases where very high predictive power is required. Such algorithms are smaller harder to visualize because of the more complexity in formulation.

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[2] "Student Placement Analyzer: A Recommendation System Using Machine Learning", Senthil Kumar Thangavel , Divya Bharathi P, Abijith Sankar, International Conference on Advanced Computing and Communication Systems (ICACCS -2017), Jan. 06 - 07, 2017, Coimbatore, INDIA In this paper author is concern about the challenges face by any institute regarding the placement. The placement prediction is very complex when the number of the entities increases in any institute. With the help of machine learning this complex problem of prediction can be easily solved. In this paper all the academic record of student is taken into consideration. Various classification and data making algorithms are used such as Naïve Bayes, Decision Tree, SVM and Regressions. After the prediction of the students can be placed in of the given category that is Core Company, dream company or support services.

[3] "A Placement Prediction System Using KNearest Neighbors Classifier", Animesh Giri, M Vignesh V Bhagavath, Bysani Pruthvi, Naini Dubey, Second International Conference on Cognitive Computing and Information Processing (CCIP), 2016 The placement prediction system predicts the probability of students getting placed in various companies

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22-23

VIZALGO

Km Abha dohre[1], Prof. Kaveri kari[2], Rucha Barbole[3], Rutvik sutar[4], Manvi Saini[5]

Dept of Information Technology Engineering

[1]GenbaSopanraoMoze College of Engineering,,Balewadi.

Abstract- *In today's data-driven world, aalgorithms play a fundamental role in solving complex problems across various domains. However, the This paper presents an overview of visual algorithms and their significance in facilitating algorithmic understanding. We explore different types of visualizations employed in visual algorithms, such as flowcharts, graphs, and animations, ..hich help in visualizing the steps, data flow, and decision-making processes of algorithms. abstract nature of algorithms often poses challenges for both experts and novices in comprehending and analyzing their inner workings. To address this issue, researchers and developers have turned to visual representations as a means to enhance algorithmic understanding. Visual algorithms combine the power of visualizations with the logical structure of algorithms, providing an intuitive and interactive framework for problem-solving and analysis.*

II. SYSTEM ARCHITECTURE

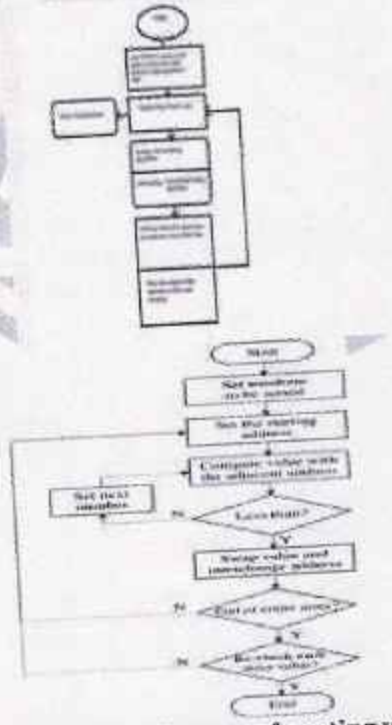

Fig: Block diagram of sorting visual algorithm

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Easy Typing using Transliteration

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Under the Guidance of Prof. Priyanka Mane

Abstract :

Now-a-days language typing becomes most important thing. Everyone wants to learn how to type. But for that they need to join computer courses for learning and typing in Hindi. So to make it easy and convenient we are providing you the online Hindi typing Website through which you can learn Hindi typing with English keyboard. You just have to type in English as you type in Mobile for messaging. We provide Easy typing website which will help you to type in any language. In our day to day life we require transliteration for various purpose like for sending mail, typing letter, generating report, writing blog article for etc. reasons we require transliteration. In this project we also learn about some SEO technique. SEO is search engine optimization which plays important role to generate traffic on website and generate online income.

I. INTRODUCTION

1.1 Introduction

Literal interpretation is the most common way of planning text written in one language into one more through a precharacterized planning. It is valuable when a client realizes a language yet doesn't have the foggiest idea how to compose its content. Hindi is the most widely used language of India. It is the most broadly communicated in and prearranged language in India. Literal interpretation assists individuals with articulating words and names in unknown dialects. Literal interpretation expects to change the letters or characters of a source language into relating letters of the objective language as it were. It doesn't deliver meaning not at all like interpretation, which is changes over the composed or expressed implications of words or text of a source language into an objective language.

Literal interpretation is the most common way of planning text written in one language into one more through a precharacterized planning. It is valuable when a client realizes a language yet doesn't have any idea how to compose its content. Hindi is the most widely used language of India. It is the most broadly communicated in and prearranged language in India.

Literal interpretation assists individuals with articulating words and names in unknown dialects. Literal interpretation means to change the letters or characters of a source language a literal interpretation framework that would use this and give a versatile arrangement towards this issue into comparing letters of the objective language as it were. It doesn't deliver meaning dissimilar to interpretation, which is changes over the composed or verbally expressed implications of words or text of a source language into an objective language.

1.2 Problem statement

India is the home of an extremely enormous number of dialects. Albeit each locale has its own local language, a large portion of the sign sheets in metropolitan urban communities are written in English. This makes it hard for a non-English peruse to grasp the content. Our model empowers a nonEnglish peruse to comprehend the English sentences by changing them over completely to their local language. Since all things, including street names, city names, association names, shop names and so forth have a similar elocution in each language, literal interpretation can be utilized the overcome any issues between the two dialects. It is likewise helpful in the event of inaccessibility of an immediate strategy to enter information in a given language. Thus, literal interpretation likewise can be perceived as the most common way of entering information in one language utilizing the content of another dialect. As a rule, the planning between the letter set of one language and the other in a literal

interpretation plan will be basically as close as conceivable to the way to express the word

1.3 Objective of study

Our fundamental spotlight was on English↔Indian Language and Indian Language↔Indian Language literal interpretation framework utilizing Google Programming interface. Customarily this issue has forever been addressed with the assistance of rule-based frameworks. which were for the most part hand-created by etymologists. The weaknesses of these frameworks are, the etymologists are supposed to have great control over both the source and target dialects and contents, and such talented assets, can't be anticipated to be accessible for all conceivable language matches. Thus, we chose to plan

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Automatic Image Captioning

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Abstract - The paper aims at generating automated captions by learning the contents of the image. At present images are annotated with human intervention and it becomes nearly impossible task for huge commercial databases. The image database is given as input to a deep neural network (Convolutional Neural Network (CNN)) encoder for generating "thought vector" which extracts the features and nuances out of our image and RNN (Recurrent Neural Network) decoder is used to translate the features and objects given by our image to obtain sequential, meaningful description of the image. In this paper, we systematically analyze different deep neural network-based image caption generation approaches and pretrained models to conclude on the most efficient model with fine-tuning. The analyzed models contain both with and without 'attention' concept to optimize the caption generating ability ofthe model. All the models are trained on the same dataset for concrete comparison.

Keywords - Automated captions, deep neural network, CNN, RNN, feature extraction, attention.

I. Introduction

A large amount of information is stored in an image. Everyday huge image data is generated on social media and observatories. Deep learning can be used to automatically annotate these images, thus replacing the manual annotations done. This will greatly reduce the human error as well as the efforts by removing the need for human intervention The generation of captions from images has various practical benefits, ranging from aiding the visually impaired, to enabling the automatic, cost-saving labelling of the millions of images uploaded to the Internet every day, recommendations in editing applications, beneficial in virtual assistants, for indexing of images, for visually challenged people, for social media, and several other natural language processing applications. The field brings together state-of-the-art models in Natural Language Processing and Computer Vision, two of the major fields in Artificial Intelligence. One of the challenges is availability of large number of images with their associated text ever expanding internet. However, most of this data is noisy and hence it cannot be directly used in image captioning model. For training an image caption generation model, a huge dataset with properly available annotated image is required. In this paper, we plan to demonstrate a system that generates contextual description about objects in images. Given an image, break it down to extract the different objects, actions, attributes and generate a meaningful sentence (caption/description) for the image.

II. Literature Survey

One of the most striking notice is the Image Net project, where they publicly supported huge number of named pictures and prepared models for the last ten years to perceive objects in the picture. Beginning around 2010, the yearly Image Net Large Scale Visual Recognition Challenge (ILSCRC) holds a contention consistently, to vie for most elevated precision on different visual acknowledgment undertakings. Presently the profound CNN networks have more exactness than people in acknowledgment. Any way Captioning pictures could be a lot testing task, since it includes object acknowledgment and tracking down connections among them. This has been unthinkable as of not long ago, attributable to gigantic improvement in computational power. Despite the fact that there are different scientists taking care of on a similar issue, there are two groups that stood apart with their calculations. One from Google, and the other from Stanford University. Google delivered a paper "Sharing time: A Neural

GREEN CLOUD COMPUTING: CHALLENGES AND SOLUTIONS

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Neha Sharma[3]
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Abstract
Cloud computing and green computing are actually complimentary to each other. Both of these advance computing gradients have important role for technological advancement and transformation. Cloud computing is a kind of network grid in which network and communication technology play an important role for complete virtualization of information technological infrastructure. On the other hand, green computing is nothing but reusing of information technological product. In green computing recycling can play an important role. Cloud computing and virtualization is an important method of green computing, which make less use of computers, products and energy. In this paper green computing has been described with special reference to their need and value in today's competitive world with the main challenges and issues of these technologies in Indian scenario. Also, the solutions to clear the obstacles have been mentioned.

Keywords: Cloud Computing, Green computing, Green Technology, Energy Management, Resource Management, Advance Computing, Information Science, Technology, Computer Science, Virtualization, Computer, IT.

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Simple Typing Using Api

Under the guidance of Prof. Priyanka Mane

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Genba sopanrao moze college of engineering balewadi,pune.
Information Technology Department,

Abstract: The ability to type in multiple languages has become a necessity in today's globalized world. Language is one such language that is widely spoken in India and neighboring countries. However, typing in Language can be a challenge for many people who are not familiar with the Language keyboard layout. To make Language typing easy and convenient, we have developed an online Language typing software that provides free and accurate English to Language typing. Our software is user-friendly and easy to use, and you don't need to remember the complex Language keyboard layout or practice Language typing for days. Once you finish typing, you can copy the text and paste it into your desired location or share it on social media platforms. This report provides an overview of our online Language typing software and its features. We discuss the importance of Language typing in today's world and the Language alphabets used in our software. Our software is designed to make Language typing accessible to everyone who wants to learn and type in Language. We believe that our typing tool will be useful for anyone who wants to communicate in Language, and it will help promote the Language language globally.

Keywords- **Easy typing, Transliteration, Language typing, SEO.**

I. INTRODUCTION

In moment's world, knowing further than one language has come a necessity. One similar language is Hindi, which is the most spoken language in India and is extensively spoken in neighboring countries as well. Still, codifying in Hindi can be a daunting task, especially if you aren't familiar with the Hindi keyboard layout. This is where our typing software comes in handy. Our software provides free and accurate English to Hindi codifying, which makes it easy for anyone to learn and class in Hindi.

Our codifying tool is stoner-friendly and easy to use. You just need to class in English, and the software will transliterate it into Hindi after you press the spacebar. However, you'll get multiple options to elect the word you ask, If you press the backspace button. The ool is analogous to the Google Easy Hindi codifying tool and provides unlimited characters and words. You do not need to flash back the complex Hindi keyboard layout or practice Hindi codifying for days; you'll be suitable to class in Hindi easily.

In this report, we will give an overview of our online Hindi typing software, its features, and how it works. We'll also bandy the significance of Hindi codifying in moment's world and the Hindi rudiments used in our software. Our software is designed to make Hindi codifying easy and accessible, and we believe that it'll be useful for anyone who wants to learn and class in Hindi.

1.1 Problem Statement

Typing in Hindi can be a challenge for numerous people who aren't familiar with the Hindi keyboard layout. This can be a interference for those who want to learn and communicate in Hindi. also, traditional styles of learning Hindi codifying, similar as joining computer courses or rehearsing for days, can be time- consuming and expensive. To make Hindi codifying accessible and accessible, we've developed an online Hindi typing software that provides free and accurate English to Hindi codifying.

Our codifying tool aims to address the challenges of Hindi codifying and make it easy for anyone to learn and class in Hindi. It's likewise helpful in the event of attainability of an immediate strategy to enter information in a given language. therefore, nonfictional interpretation likewise can be perceived as the most common way of entering information in one language exercising the content of another shoptalk. As a rule, the planning between the letter set of one language and the other in a nonfictional interpretation plan will be principally as close as conceivable to the way to express the word.

1.2 Objective of Study

Our fundamental spotlight was on English↔ Indian Language and Indian Language↔ Indian Language clinical interpretation

22-23

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Classification Of Plant Leaf Disease Using Machine Learning & Pre-Processing Techniques

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Abstract- *Agriculture is the backbone of the Indian economy. In India itself, around 65% of the population is based on agriculture. Due to changes in weather & local conditions, the crops get infected & they get infected by various diseases which results in the bad condition of the crops. Common effects on plants include a detectable change in color, size, or function of the plant. The black spot is a fungal disease that causes a black round spot that forms on the upper layer of leaves, Blight can rapidly spread the infection. The canker spot is usually surrounded by yellow halo/spot & they can be seen on both the upper & lower sides. we are presenting the counterfeit insights based on programmed plant leaf illness location and classification for the fast and simple location of malady and after that classifying it and performing required cures to remedy that infection. This approach is the line with our goal of increasing crop efficiency in horticulture.*

Keywords- Plant Leaf Diseases Detection, Classification,Image Pre-processing, Segmentation, K Means clustering

I. INTRODUCTION

Human Beings have 3 basic needs i.e., food, clothes, and shelter. One of them is Food …but not only humans, animals also need food to survive. As it is important for living beings to survive they should be healthy and clean…Our module help the farmers to keep the crops healthy with the help of the detection of leaves. CNN algorithm we will use for the automated processing of image recognition & processing due to its ability to recognize patterns of image. The CNN algorithm is designed to suit both healthy leaf and sick leaf. Photos are used to train the model and output is determined by the input leaf.Accuracy and speed are the main factors that will decide the success of automatic plant leaf disease detection & Classification mode.Deep learning gives detectors the chance to quickly and accurately identify crop diseases, which will enhance plant protection accuracy and broaden the application of computer vision in precision agriculture

II. SYSTEM ARCHITECTURE

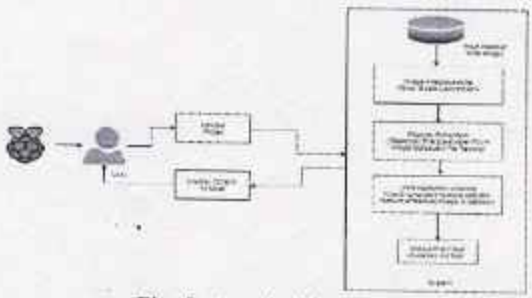

Fig: System Architecture

Step 1 : Start
Step 2 : Prepare Database (Healthy/Unhealthy)
Step 3 : Preprocessing Normalization
Step 4 : Train CNN
Step 5 : Real image from PC
Step 6 : Pre-processing
Step 7 : Test Network
Step 8 : if probability of healthy > probability of unhealthy
Display Healthy Image Otherwise
Display Unhealthy image
Step 9 : End

III. IMPLIMENTATION

In this section , the detailed designed and implementation of the system are presented.

The block diagram of plant disease detection process is given in the figure below.

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Android Application For Smart Parking System

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Abstract— *Now-a-days, vehicle parking has become a major problem in urban areas with the shortage of parking spaces. it is very difficult and frustrating to find a parking space in most metropolitan areas, especially during the rush hours to solve this problem. The paper entitled smart parking system using android application, the major motivation of this paper is to reduce the traffic congestion in roads, multistoried buildings and malls due to unavailability of parking spaces. The proposed application provides an easy way for reservation of parking slot. In this application user can view various parking areas and also view whether space is available or not. If the booking space is available then he can book it for specific time slot. The paper displays the nearest empty slot if present with respect to user location. Our project aims to make efficient use of parking spaces. Also, this system provides an additional feature for user. To alleviate the parking problems, smart parking systems must be implemented. In this paper, the background on parking problems is introduced and relevant algorithms, systems, and techniques behind the smart parking are reviewed and discussed. This system gives a further feature of cancelling the bookings. User can cancel their booked area anytime. Users may even make price online primarily based totally at the time taken for the reserved area the quantity might be calculated and the person can make charge.*

Keywords—*Android Application, Firebase, Cloud Storage, GPS, Real-Time System, Parking Space Detection*

1. INTRODUCTION

The number of personal vehicles usage is increasing day by day. Due to this searching for a vacant parking area during peak hours is not only time-consuming but also results in wastage of fuel. The drivers keep searching for a proper parking lot that leads to increased traffic. Increasing volume of vehicular exhaust creates a negative impact on the environment. Hence reservation-based smart parking has become the need of the day. At this time, most existing parking lots do not have a system in place. Most of them are managed by hand and are a bit ineffective. Every user's demand should be I. Should be more efficient ii. Users friendly iii. They should provide more security. The idea behind our Android Application- "valid spot" is to help the user for online parking booking.

2. LITERATURE SURVEY

Now-a-days technology has been moving fast in all stream, with that people are moving forward with the time. To save little bit of time of people of car parking as well help them to park the car in legal space not on road and not becoming the frustrated for finding the space for car, this application the "The Smart parking Application" has been introduced. "Parking system controlled by Android application" is a miniature model of a car parking system that can regulate and manage the number of cars that can be parked in given space at any given time based on the availability of parking slot. For this topic, various papers are available with technology they have used from all this research of technology and information here are some paper which are associated with this topic. expensive. Another challenge is to identify the machine learning algorithms or capabilities that might help to process the collected data. Moreover, it is crucial to make all parties provide an excellent functionality with each other in the real time and avoid occurring of errors as much as possible.

In this paper, smart parking systems obtain information about available parking spaces, process it and then place the car in that position. A prototype of the parking assistance system based on the proposed architecture has been built. A well-developed control system is necessary to combine the whole process.

3. METHODOLOGY

Modules

Real time vehicle parking system using android application mainly consists of three modules.
They are

- User Module
- Administrator Module
- Booking Module

User Module

This module of the application deals with the user interface/user experience. This module provides the user with the flexibility of registering, logging in, booking and making the payment. If the user is new to theapplication, then, the user must register in the application by providing the user's details. After the registration, the user logs in using the user-id and password. Once the user logs

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Peer-to-Peer Car-Sharing System Using Blockchain Technology

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Abstract: ***Peer-to-peer car-sharing is a car-sharing service can be built that decentralizes the interaction between users of the app and ensures that no single entity has control over the transaction or the information involved. The project also ensures customer privacy and provides fair and accurate pricing by eliminating third-party services, and it is possible to do all of this by using smart contracts. Implementation of automation of most of the tasks and creating a crypto token that is specific to the application for use in payment for services. This leads to Exchange for carsharing service between the passenger and driver.***
Keywords: Blockchain, Smart Contract, Decentralization, MetaMask, Peer-to-Peer,

I. INTRODUCTION

As demand for car-sharing increases, various companies are stepping up to provide this service, with Uber and OLA also adopting auto-rickshaws in India. However, they share a commonality regarding the use of a centralized approach for their day-to-day operations, which imposes policies, rules, regulations, terms, and a variety of conditions imposed on both passengers and drivers. Similarly, to ease the user experience the car-sharing service providers would involve intermediates or third-party companies to carry out the many operations such as payment, validations, data security, etc. involving more intermediaries and companies led to creating insufficient transparency, a low pricing model, and insufficient privacy since data is shared among the companies. These drawbacks contain led to a broad analysis of blockchain technology and showed our inducement to present a paper on solving the problems concerned with centralized methodology. We research and try to solve this by using a decentralized concept and removing third-party mediators by using Ethereum Smart Contract. Blockchain is a database that contains decentralized, immutable, reliable, and distributed throughout the world Ethereum is a blockchain technology that uses smart contracts, Smart Contract is a contract that includes predefined rules, which once depicts cannot be altered again, not even by admin.

II. PROPOSED SYSTEM

In order to implement a blockchain-based P2P car-sharing platform, the first step is to select a suitable blockchain platform. Ethereum is one of the most popular platforms for building decentralized applications due to its smart contract capabilities and large developer community. Smart contracts are self-executing programs that run on a blockchain network. They are encoded into the blockchain and can be automatically executed when certain conditions are met, without the need for intermediaries or central authorities. Smart contracts are used for a wide range of applications, including finance, supply chain management, voting, and more. The Ethereum System uses smart contracts to automate the process which allows secure and efficient transactions between driver and rider. The user interface of a Peer-to-Peer car-sharing platform should be easy to use for drivers and riders. In order for users to register themselves, they should be able to search for rides, register as drivers and riders, and make payments with ease. Besides the user interface, the credentials of the users should also be stored in a database for security purposes. Cryptographic algorithms to ensure that transactions are safe, transparent, and tamper-proof. The system utilizes a cryptocurrency, such as Ether (ETH), to facilitate payments between car driver and rider. The use of blockchain technology ensures secure and transparent transactions, with no need for intermediaries or third-party payment processors. This includes regular updates to the blockchain platform and smart contracts, as well as the implementation of new features and functionality based on user needs.

III. SYSTEM ARCHITECTURE

The process starts with the account opening. Each user (driver and rider) has to open an account to perform any task with Go-Cars. If the person opens the account as a rider, he is already available or visible to the connected network such as in MetaMask network. A rider needs to deposit fixed security money to make himself available to the network every time he acquires in the subsequent procedures. Else, he must have chosen to be the driver while opening the account.

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Classification Of Plant Leaf Disease Using MachineLearning & Pre-Processing Techniques

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Abstract- *Agriculture has a high impact on the life and economic status of human beings.Improper management leads to a loss in the quality of agriculture products.Farmers lacks the knowlgde of diseases and hence affect their crops causing less production.Kisan call centers are available but do not offer service 24*7 and sometimes properly on call,there arises a need to analyze the image of the affected area of the disease.Though images and videos of crops provide a better view and agro-scientists can provid a better solution to be to resolve the issues related to healthy crops, the farmers are not yet aware of this. It is to be noted that if the productivity of the crop is not healthy, it poses a high risk to providing good and healthy nutrition. Recognizing illness can prompt faster treatment to lessen the negative impacts on the harvest.*

Step 1 : Start

II. SYSTEM ARCHITECTURE

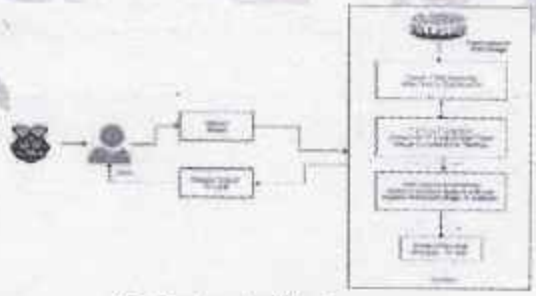

Fig: System Architecture

Keywords- Plant Leaf Diseases Detection, Classification, Image Pre-processing, Segmentation, K Means clustering

I. INTRODUCTION

The deep convolutional network model used in this project uses a variety of plant leaf disease photos to provide quick and accurate automated detection. Symptoms of plant leaf diseases might vary. Inexperienced farmers may have a harder time spotting infections than trained plant pathologists. An autonomous system that is created to recognize agricultural illnesses by the appearance of the crop and visual symptoms could be a huge assistance to farmers as a verification system in disease identification We can identify plant leaf disease using neural networks and digital image processing approaches. The last few years have seen enormous progress in deep learning. Currently, it can extract practical feature

A Review On Revolutionizing Crowdfunding: A Hybrid Platform for the Future

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Abstract

Crowdfunding platforms have redefined the financial landscape, enabling innovators and entrepreneurs to access capital like never before. This paper introduces a hybrid crowdfunding platform designed to merge the best aspects of existing models, offering a unique and versatile solution. Through a comprehensive review of the crowdfunding ecosystem, this paper presents an in-depth analysis of the strengths and limitations of current platforms.

The hybrid crowdfunding system described herein combines donation-based, reward-based, and equity-based elements, allowing fundraisers to tailor their campaigns to specific needs. This innovative approach aims to bridge the gaps present in the current crowdfunding landscape and offer a platform that can support a wide range of projects and campaigns. The analysis covers the historical evolution, existing models, and challenges faced by contemporary crowdfunding platforms, culminating in a critical examination of the strengths and weaknesses of each.

The proposed hybrid system is positioned as a versatile and adaptable solution, promising to enhance crowdfunding's capacity to drive innovation and support entrepreneurial endeavors across various sectors.

Keyword: *crowdfunding, hybrid crowdfunding, investment, crowd, finance, Hybrid model, diversification, accessibility, risk mitigation, innovation, community engagement, transparency, funding options, success stories, user experience.*

Introduction:

Crowdfunding platforms have revolutionized the way individuals and businesses access capital, ushering in a new era of democratized finance. Crowdfunding has transcended traditional methods of fundraising, enabling innovators and creators to leverage the power of the crowd to bring their ideas to life. It has disrupted the financial landscape, fostering a dynamic ecosystem where entrepreneurs, artists, and philanthropists can directly connect with backers who share their vision.

The rise of crowdfunding platforms can be attributed to the proliferation of the internet and social media, which have connected millions of people worldwide. This interconnectedness has paved the way for a collaborative approach to funding, where backers can collectively support projects, startups, and charitable causes. Crowdfunding has emerged as a potent force for innovation and social change, empowering creators to test their concepts, validate market demand, and build communities around their initiatives.

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SURVEY ON UNIFIED CAMPUS PORTAL SYSTEM

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ABSTRACT: The goal of our Campus Portal System is to provide an integrated web platform designed to streamline academic communication and management within an educational institution. This system addresses the existing challenges faced by students, teachers, and Heads of Departments (HODs) by consolidating diverse functionalities into a single, user-friendly interface . Our platform addresses the challenges faced by students and college faculties to share the announcements, notices, etc and to maintain the students academic records, and to track the attendence records of students. The system automates attendance tracking, providing real-time insights into students' attendance records. An intuitive interface allows teachers to efficiently manage and update attendance records. To address the issue of low attendance, an automated alert system is implemented. Students with attendance below 75% trigger notifications, sent via SMS or email, to both the concerned student and their designated emergency contact. By consolidating these features into a single platform, the Campus Portal System aims to enhance collaboration, transparency, and efficiency in academic management, ultimately providing a more enriching educational experience for all stakeholders.

KEYWORDS: Centralized Communication Platform

I. INTRODUCTION

In the ever-evolving landscape of education, the effective management of academic information is paramount for fostering a seamless and enriching learning experience. Recognizing this, our Campus Portal System emerges as a dynamic solution, designed to revolutionize the way academic communication and management are conducted within educational institutions. This integrated web platform is meticulously crafted to address the existing challenges faced by students, teachers, and Heads of Departments (HODs), offering a unified, user-friendly interface to streamline diverse functionalities.

The multifaceted challenges encountered by students and faculty members in sharing announcements, notices, and maintaining comprehensive academic records underscore the need for a cohesive and efficient system. Our Campus Portal System not only serves as a centralized hub for disseminating information but also caters to the intricate task of managing students' academic records and tracking attendance.

Our Campus Portal System tackles communication challenges with an Integrated Communication Platform, consolidating functions for announcements and notices. Automated Attendance Tracking offers real-time insights, while an efficient interface empowers teachers in attendance management. An Automated Alert System notifies students and emergency contacts of low attendance, fostering timely interventions. This holistic approach enhances collaboration, transparency, and efficiency, providing a seamless and enriching educational experience for all stakeholders.

II. IMPLEMENTATION DETAILS

Implementation is the realization of an application, or execution of a plan, idea, model, design, specification, standard, algorithm, or policy. In this project we have usedfollowing tools or components:

1. Java: Java is a versatile, object-oriented programming language known for its platform independence, making it widely used for developing cross-platform applications.
2. HTML (Hypertext Markup Language): HTML is the standard markup language for creating web pages, defining the structure and elements to display content on the World Wide Web.

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Smart Wearable Device For Child Safety By Using IOT

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Abstract - Now-a-days we can see that human life is becoming very fast. Moreover, the city life is getting very busy day- by- day. So in the daily busy schedule it is becoming very difficult for the parents to monitor their children closely. This paper discusses about a smart wearable device like a wristband which tracks the child from time to time to ensure their safety. If any problem occurs it would alert parents through the cell phone so that they can take immediate action. This paper focus on the SMS text enabled communication. Parents can send SMS with some keywords and the device reply back. The device can detect the child's approximate location, it can detect the body temperature and the surrounding temperature, humidity and also the heartbeat of a child. For the emergency situation, the device would have some measures like an alarm buzzer, SOS light which will notify the bystanders to help the child. So this paper is all about the safety and security of a child to help them to recover from any type of difficulty.

Keywords = Wearable, wristband, child safety, IoT, location, SMS

1.INTRODUCTION

This paper is based on Internet of Things (IoT)[1]. IoT means a collection of systems and devices which are interconnected with the actuators and sensors(real-world) to Internet. Examples of some IoT based smart systems are smart city, smart lighting system, smart traffic control system, home automation etc. This paper also focuses on Wireless Sensor Networks
[2] and used many sensors. The usage of these smart systems are increasing day by day. The main motivation that works for this device is security and safety of a child who can face any trouble like lost in a crowded area, not finding their parents etc. This device helps the parents to track the child and to find them. There are quite a few wearable devices in Medical Internet of Things and their comparative analysis
[3] which could be used as a base framework for designing the proposed device.There are many such wearable devices available today which tracks child's location, body temperature etc.using sensors through Wi-Fi[4] and Bluetooth[5].But these two communication medium proved to be unreliable medium. One of the existing work like Wristband Vital[6] uses Bluetooth 4.1 module as a communication medium which is a very unreliable source. So another mode of communication is introduced which is SMS text enabled communication between parents and children in the GSM platform. In GSM platform the rate of failure is relatively small. Some works like Design and implementation of Microcontroller Based Short Message Control System[7], Child safety wearable device[8] uses SMS platform as a communication medium. This paper uses Arduino[9] Uno platform. Arduino GSM Shield provides all the functions like SMS send and receives calls etc. Parents can send SMS with some keywords and the device reply back. The device can detect the child's approximate location , it can detect the body temperature and the surrounding temperature to approximate the child's physical condition. some allergy in high humid conditions then it can send an alert to notify the situation by measuring the humidity. The device can also measure the heartbeat of the child to track the child's level of physical exertion. Parents can send SMS with some keywords and the device reply back. The device can detect the child's approximate location , it can detect the body temperature and the surrounding temperature to approximate the child's physical condition. If a child has some allergy in high humid conditions then it can send an alert to notify the situation by measuring the humidity. The device can also measure the heartbeat of the child to track the child's level of physical exertion. There is a secondary module added like SOS light and Alarm Buzzer.

When a parent sends an SMS to the device it makes the SOS light ON to alert the bystanders. SOS is programmed with Arduino. Similarly the Alarm will also work in this way. This design also includes some filtering of any kind of interference created due to skin friction or other environmental effects[10]. So the proposed wearable device will use SMS as a communication medium to ensure secured communication. The device could be customized as per the requirements by programming the Arduino System.

2. RELATED WORKS

Many wearable devices are available today. Some existing works like Design and implementation of Microcontroller Based short Message Control System[7] which exposes some applications of SMS technology other than call and sending and receiving SMS. This system gives some solution of some problems of daily life like home appliances(television, light)controlling, water pumping machine, ON/OFF of a switch etc. remotely when the user is not in house. These solutions are cost effective. The messages which are allowed by Short Message System(SMS) on a GSM platform has a length maximum of 160 characters. The main target of this paper is to designing a embedded device.

3 .PROPOSED DESIGN AND ARCHITECHTURE

The proposed system, a Smart Wearable Device for Child Safety using IoT and GPS, aims to enhance the safety and security of children in various environments. This wearable device will incorporate advanced IoT and GPS technologies to provide real-time tracking, geofencing, emergency response, and secure communication features. The GPS module in the wearable device accurately tracks the

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Road Safety Alert System

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Abstract - India is a populous country and a lot of wide roads are to be crossed in different parts of the country. A lot of people cross the street every day and due to large number of vehicles on the street, risk of road accidents increases. Some even lead to death. As the laws of road crossing are not very strict in India, it becomes important to use IoT- based road safety system. A cost effective solution to this is using a system based on Arduino UNO R3. These devices are fully autonomous and can work as per the pedestrian crossing and traffic signal rules. This device will alert and take necessary actions to prevent damage to the life.

Key Words: Arduino UNO R3,Servo Motor, LED , Jumper Wires,Breadboard.

1.INTRODUCTION

IoT-based automation are now-a-days rapidly been implemented for security purpose, but still there are no such application used in the traffic control or for road safety purpose.

Our major arterial roads are highly prone to accidents which lead to above 50% of pedestrian death. Even the blind curve is also riskier as drivers cannot see approaching traffic. And it would be tedious and difficult for a person to concentrate and handle traffic 24/7. Even if a person meets with an accident, there are no such solutions implemented to send emergency responder for fast recovery.

In last 5 years (2016-2020), more than 24 lacs of road accidents have occurred. In 2020, number of accident reported are 3,66,138, number of person killed are 1,31,714 and number of injuries are 3,48,279.

This paper introduces with a road safety system based on IoT, to provide solution to the problem faced in the road safety issue. The main concern are as follows:

- Pedestrians doesn't notice the traffic approaching while crossing the street.
- Vehicle struck in the traffic signal tries to break the rule and escape the signal.
- The roadblock will appear to stop the vehicles to pass or break the signal when it is red. The roadblock will only appear if the signal is red for the same time and will go under the ground when the signal turn greeen

2. Number of Accident due to Traffic Rules violation

Traffic Rules violation	2022		2021	
	No. of accidents	Persons Killed	No. of accidents	Persons Killed
Over-speeding	440,000	100,588	3,99,028	1,71,723
Jumping red light	4,441	1,989	6,443	1,997
Driving on wrong side/ Lane indiscipline	28,781	9,764	24,431	9,201

3. Top 10 States in Number of Accident

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NFT MARKETPLACE

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Abstract – This NFT, abbreviated for "non-fungible tokens", are digital assets that are representative of physical or digital creative work or intellectual property including music, digital art, games, gifs, video clips and more. "Nonfungible" in NFT means that each token is not exchangeable with another token, making each token a unique entity that represents a single specific object. These tokens consist of digital information in the form of media (music, video, image) the value of which can be calculated in terms of cryptocurrencies. The NFTs are part of the Ethereum blockchain in particular but differ from Ethereum coins which are fungible, that is, exchangeable with similar types of assets. Rapid technological advancements and its growth are accompanied by increased security risks including those of authenticity. The uniqueness and nonfungibility of NFTs minimizes, if not completely eradicates, the problem of authenticity and counterfeits to a large extent by means of a digital signature of the owner incorporated in each token such that an asset is easily traceable to its owner. Furthermore, it also addresses the problem of the customers being deceived into buying counterfeit items e.g., tickets or artwork. Buyers can easily trace the items on sale to owners, thereby ensuring a legitimate purchase. Moreover, the introduction of NFTs is opening new avenues for artistic businesses that previously found it challenging to establish online markets in an era of internet-based businesses due to the lack of exclusive ownership .

Key Words: *Blockchain; NFT; Ethereum;*

1.INTRODUCTION

Non-fungible tokens (NFTs) are unique digital assets traded on NFT marketplaces. They differ from fungible tokens like cryptocurrencies in that each NFT is one-of-a-kind and has a distinct value. NFTs have opened up new revenue streams for creators to offer something rare and exclusive to their fans.

Most NFTs are digital, and some of the most popular examples include Jack Dorsey's first tweet and the viral animation 'Nyan Cat.' In 2020, the NFT market was worth $250 million, with a growth rate of 299% according to a report by L'Atelier BNP Paribas and nonfungible.com. Additionally, NFT marketplaces have been successful in generating over $1 billion in sales. NFT marketplaces provide a secure and transparent platform for buying, selling, and trading unique digital assets.

They allow creators to showcase their work to a global audience and monetize their creations through the sale of NFTs. Specialized NFT marketplaces cater to specific niches, making it easier for creators to target their audience.

Overall, NFT marketplaces have transformed the digital art and collectibles market, offering new opportunities for creators to monetize their work and for buyers to acquire unique, collectible digital assets.

2. Body of Paper

2.1 Objective

The objective is to give the world a digital product that is unique. It is a one-of-a-kind asset that has no other copies. Ethereum is the leading blockchain and many others can implement their own NFTs. Non-Fungible Tokens can be anything from games to digital items. The main aim of this project to give artists and other such people a place where they can show their work and make profit out of it without having to worry about security.

2.1 Proposed System

Our NFT marketplace's UI is its "face" by which the users will judge its appeal and user-friendliness. So we will develop the UI carefully based on our target audience's preferences and usability principles. NFT marketplace means a virtual shopping center that offers collectors and artists boundless tokenization and purchase of programmable digital goods, such as: Digital art, Gaming items, Collectibles etc. You can't create an NFT marketplace without the function of NFT minting. The minting algorithm should also include robust safety testing, end-to-end encryption, and domain name creation to make the NFTs unique and operational. It will have maps to locate NFTs. It's possible to build personal goods with the help of the inserted minting instrument. There are different types of sales that can take place in an NFT marketplace.

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Survey Paper on Online Platform for Visualizing Algorithm

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DEPARTMENT OF INFORMATION TECHNOLOGY

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Introduction:

As the distance and online learning is going on integrated platforms are required for students learning. Our website is a platform that aims on "Algorithm Visualization", which will ease the learning process and help to understand algorithms in better way. This website includes various other functionality that is play, pause, speed button in visualization. This website is very useful for computer science student and teachers for learning data structures and algorithms. The main of this project is to make better understanding of data structures and algorithm. This website also provides the knowledge about data structure array, stack, queue, and deque as well. Thus, our project provides better understanding of data structures and algorithms.

The project is an interactive web application designed to visualize various sorting algorithms, incorporating additional features like pathfinding. The user interface has a skeleton structure created using HTML, CSS, and Bootstrap for a visually appealing and responsive design. The inclusion of sorting algorithms and pathfinding algorithms adds versatility to the application, making it a comprehensive tool for understanding algorithmic processes. A new feature, the speed control for visualization, has been introduced to allow users to adjust the pace of algorithm execution, enhancing the learning experience. The project aims to be an effective learning aid, capturing user attention through interactive elements while providing educators with a powerful tool for teaching complex algorithms.

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AN AI BASED EVENT RECOMMENDATION & MANAGEMENT SYSTEM

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Abstract : *- The amount of information on the Internet has increased exponentially in recent years. Evaluating and analyzing this data and/or data extraction is difficult due to the volume of data. In this case, a consent agreement will be used as a solution to this problem. Create a web application for "Approval Approval". The content-based collaboration agreement aims to provide students with diverse and easy-to-use opportunities for collaboration on different projects. This article describes the application and approval process. The overall performance of the system is discussed. Events will be recommended to students based on their priority among residents and the standards of other students attending various events at the University and surrounding areas.*

Key Words: Recommendation System, Content based filtering, collaborative filtering, hybrid filtering, log, count.

1. INTRODUCTION

Recommendations are used in many business applications and are data filters used to predict ratings and/or preferences given to users. The planning process will envisage activities, discussions and workshops for students. This web-based application will help students recommend events of interest and participating organizations create and access event databases better and more efficiently.

The website will provide all information about regular events, registration deadline, upcoming events and expired events. Participating organizations will have easy-to-use apps to promote and run events, an easy-to-use website for students looking to sign up for events, and recommendations to avoid searching too hard for events they like.

The system allows administrators to recognize students attending a particular event, making it easier to manage students with event times and appointments. Due to the large number of students, they are divided into different types and managed by special administrators. Additionally, approving this event allows the student and the event manager to check the payment work. The system also accepts event feedback and comments. The website makes it easy for students to learn about current events, past events, and upcoming events

2. LITERATURE SURVEY

[1] Proposed a consensus using collaboration and content-based filtering. The integration process uses each user's suggestions, and the content-based process uses the user's context (such as the user's history or research search) to make recommendations. Hybrid filtration is the combination or combination of two or more methods.

[2] Project-based collaborative filtering (IBCF) and user-based collaborative filtering (UBCF) are used in the recommendations. The project-based collaboration filter is used to estimate products because it calculates and recommends common features of products. User engagement filtering techniques are used to predict or predict the product-related interests and behavior of other users who interact with the customer.

[3] An offering that generates real-time recommendations for new Internet users. This estimate is based on the user's previous rating of the product. It will help estimate user ratings for those who don't give ratings. Then, according to these estimated scores, suggestions will be produced according to the highest level given by the estimated score.

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AI and IOT Based Smart Classroom

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Abstract

AI and IoT technologies are revolutionizing education by creating dynamic and interactive learning environments. Smart classrooms are equipped with sensors, devices, and AI-driven software that enable real-time data collection, analysis, and personalized learning experiences. These technologies enhance the quality of education by optimizing classroom management, improving student engagement, and providing educators with valuable insights.The growing significance of AI and IoT in reshaping the educational landscape and fostering a more efficient and effective learning process. It emphasizes the potential of smart classrooms to cater to diverse learning styles, encourage collaboration, and prepare students for the demands of the 21st century. The AI and IoT-based smart classroom is not merely a concept but a promising reality that has the potential to revolutionize education and prepare students for a rapidly evolving future.

Keywords: Automation,Virtual Assistant,AI,IOT ,Raspberry Pi,Smart Classroom

1. Introduction

In today's rapidly evolving educational landscape, the integration of emerging technologies has revolutionized traditional classroom settings. The convergence of Artificial Intelligence (AI) and the Internet of Things (IoT) has given birth to the concept of the smart classroom, offering a dynamic and interactive learning environment. This paper explores the design, implementation, and benefits of an AI and IoT-based smart classroom.

AI in Smart Classrooms: AI plays a pivotal role in personalizing education. It analyzes students' learning patterns, adapting the curriculum to their needs, providing immediate feedback, and enabling intelligent content recommendations. This facilitates a more efficient and tailored learning experience, promoting engagement and knowledge retention.

IoT in Smart Classrooms: The Internet of Things connects various devices and sensors within the classroom, allowing them to communicate and share data. This interconnectivity enables real-time monitoring of the classroom environment, such as temperature, lighting, and occupancy. Additionally, IoT enhances security and simplifies administrative tasks, offering convenience for both educators and students.

2. Literature Survey

1.An Approach Towards Building an IOT Based Smart Classroom

By Ani R,Krishna S, Akhil H, Arun Uext The scope of this field is limitless and has emerged as a winner in various areas ranging from Medicine, Engineering, Computer Science, Space and Technology, Automobiles and so on. The center of purpose is utilizing IoT based technology in accomplishing automation for classrooms. In this paper, we propose an approach to control and manage electrical equipments such as fans and lights based on human presence. A camera is used for recognizing the presence of people in the classroom and for analyzing their seating position. Here a classroom is divided into two segments. Whenever a human presence is detected in a particular segment then the light and fan will be switched ON. The reasonable objective of this paper is how to build up a smart classroom where we can automate the electrical equipments with a focus towards energy conservation.

2.Learning the Classroom Automation Preferences with Low User Intervention by Feng-Cheng Chang, Hsiang-Chieh Yuan

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REVIEW ON: Email System Using Speech Recognition

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Abstract - One of the most used forms of communication among people is Email. A lot of confidential and urgent information is exchanged over emails in today's time. There are about 253 million visually impaired people worldwide. These visually impaired people are facing a problem of communication. Since technology is growing day by day, these visually challenged people feel that they are more challenged. So, we proposed a Voice-based Email System using AI that will make the email system very easily accessible to visually challenged people and also help society. Accessibility is the most important feature that is considered while developing this system.

Key Words: *- Screen readers; Audio Based environment; Voice Based Technology*

1.INTRODUCTION

The technology is evolving very rapidly, day by day, that is the full life of the people, that light, we can say that of all the business can be carried out with high precision and efficiency for a long period. The connections present in the areas have risen to a new level with the development of technology. In this era, the Internet has made communication so easy that everyone can communicate easily, and distance is just a marginal distribution of communication. [9], We have to think about communication over the Internet; the first thing that comes to mind is communicating with them via email. The mail is considered the most reliable way to share important information and an email, and it is used all over the world, but to have access to the Internet, an individual must be able to see. Accessible to millions of blind and visually impaired people who cannot see the screen, and thus, there is no internet connectivity on your keyboard, you may have to [12]. So, they are a long way away from email and the world of the Internet. The blind can use the mail system. You can send, receive emails, and read the information sent through email; therefore, the existing system may not be easily accessible. It is a common misconception that to access the Internet, and one must be able to read what is printed on the computer. This is not the case, and Internet technology is useless for individuals with bad eyesight. There is only one way for a visually impaired person to send you an email message, and that is to pass through all the contents of the email address to any third party for the third party to be prepared to send an email on their behalf when it comes to copyright, as well [10]. However, this approach has be found for a visually impaired person, and sometimes the content can also be personalized to preserve the integrity of the products. Therefore, to help the people, and for the development of the society, and the author came up with this idea to assist the person with a vision problem, and that provides the ability to send and an email to initiate(start) they only need to speak up what they want and do not need any visual object.

2. Body of Paper

2.1 Speech Recognition using Artificial Intelligence

Artificial intelligence (AI) is a technology used for the intelligent management system to create machines that mimic human intelligence and take actions as a human does. Some AI applications in various systems, natural language processing (NLP), computer vision, etc. Understanding and analyzing human languages, such as English and many other languages, with the extraction of metadata, keywords, sentiments, attitudes, by using the concept of deep learning and concepts of natural language processing.

2.2 Project Description

Earlier, blind people does not send email using the system. The multitude of email types along with the ability setting enables their use in nomadic daily contexts. But these emails are not useful in all types of people such as blind people they can't send the email. Audio based email are only preferable for blind peoples. They can easily respond to the audio instructions. In this system is very rare. So there is less chance for availability of this audio based email to the blind people. This mainly helps the physically challenged people like handicapped and blind people. A voicemail system architecture provides a way for visually impaired to access e-mails in most easy and efficient manner. Friendliness in Graphical User Interface can be understood easily. The user no need to remember any keyboard shortcuts. This application can be used by both normal people and physically impaired people.

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A Review on Hand Gesture-Based Virtual Mouse Control Systems

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ABSTRACT:

The world of human-computer interaction is constantly pushing the boundaries to create more natural and user-friendly interfaces. A prime example of this is the revolutionary technology of hand gesture-based virtual mouse control systems. This survey delves into this dynamic landscape and presents an in-depth analysis of the various techniques used for hand gesture recognition. From vision-based methods to sensor-based approaches, this paper explores the wide-ranging applications of this technology, including gaming, healthcare, and education. By examining the challenges, limitations, and upcoming trends, this survey offers a comprehensive understanding of the current state of research in this field. Moreover, real-life case studies are presented, providing valuable insights into successful implementations.

Keyword: Hand Gesture Recognition, Virtual Mouse Control, Human-Computer Interaction, Gesture-based Interfaces, Computer Vision, Natural User Interfaces, Gesture Recognition Techniques.

[1] Introduction

In today's modern society, technology has become an integral part of our everyday routines, with computer systems continuously evolving on a global scale. These cutting-edge advancements have the ability to complete tasks that surpass human capabilities, greatly impacting and shaping our way of life. At the heart of this symbiotic relationship between humans and computers is the universal mouse - a tool that enables us to interact with graphical interfaces through pointing, scrolling, and navigating. Although traditional hardware mice and touchpads have proven to be effective, they also present challenges such as limited portability and susceptibility to wear and tear.

Throughout the years, technology has undergone a transformation, revolutionizing mouse functionality from wired to wireless and greatly improving convenience. In the pursuit of a seamless and engaging interaction, developers explored gesture recognition models that often required costly peripherals. The purpose of this paper is to introduce an innovative technology: the Hand Gesture Controlled Virtual Mouse using Artificial Intelligence. This groundbreaking invention empowers users to effortlessly control their computer mouse through hand gestures.

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Review on WebApp Vulnerability Scanner

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Abstract:

Web Application Vulnerability Scanners (WAVS) play a pivotal role in modern cybersecuritypractices, providing essential tools for identifying and mitigating potential threats within web applications. This abstract delves into the significance of WAVS in safeguarding onlineassets, exploring their methodologies, critical features, and the impact they have on
enhancing overall security postures. By employing techniques such as black-box testing, inputfuzzing, and pattern recognition, these scanners systematically evaluate web applications,
pinpointing vulnerabilities like SQL injections, Cross-Site Scripting (XSS), and authenticationweaknesses. Comprehensive reporting and continuous monitoring features ensure that
organizations can respond promptly to emerging threats. Collaboration with penetrationtesting further strengthens security evaluations. Understanding the nuances of WAVS is fundamental for organizations striving to maintain robust defences against ever-evolvingcyber threats, thereby ensuring the integrity, confidentiality, and availability of their web-based services and data.

Introduction:

A Web Application Vulnerability Scanner is a fundamental cybersecurity tool designed to evaluate the security robustness of web applications. Employing automated techniques, these scanners systematically crawl, map, and test web applications, identifying potential
vulnerabilities such as SQL injections, Cross-Site Scripting (XSS), and authentication flaws. Byproviding a comprehensive analysis of a web application's security posture, these scanners enable organizations to proactively address weaknesses, ensuring data integrity, user confidentiality, and protection against cyber threats.

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A REVIEW PAPER ON FLUTTER-BASED SOLUTION FOR EFFICIENT VEHICAL CHARGING INFRASTRUCTURE

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Abstract : *- In the past decade, remarkable strides in electric vehicle (EV) technology and charging infrastructure have significantly contributed to reducing emissions and enhancing power delivery efficiency. Despite these advancements, the challenge of locating charging stations remains a notable concern for EV owners. Unlike traditional vehicles, EVs require pre-planning for charging, limiting the flexibility of refuelling options.*

To address this issue, we present an innovative EV Charging Station app developed using Flutter. This application aims to empower EV drivers by providing real-time information on available charging stations in their vicinity. Beyond simple location services, the app allows users to book charging slots, ensuring accessibility and convenience.

Moreover, the app serves as a comprehensive trip planning tool for EV owners. By inputting their journey's source and destination, users receive a detailed roadmap highlighting all the charging stations along their route. This feature not only facilitates efficient trip planning but also contributes to a seamless and stress-free EV ownership experience.

Key Words: Electric Vehicles, Charging Infrastructure, Flutter, Mobile Application, Google Maps API, Sustainable Transportation, GreenTechnology

I. INTRODUCTION

In the dynamic landscape of modern transportation, the past decade has witnessed a transformative surge in electric vehicle (EV) technology, accompanied by monumental advancements in charging infrastructure. Beyond their role in curbing emissions, electric vehicles offer superior power delivery and efficiency, leveraging innovations such as regenerative braking to recharge batteries while in motion. However, a critical challenge persists—the accessibility of charging stations.

Unlike conventional vehicles that can refuel at any gas station, EV owners must meticulously plan their journeys to ensure their vehicles remain charged. Recognizing the indispensable need for robust charging infrastructure, we introduce an innovative solution: the EV Charging Station app. Developed using the versatile Flutter framework, this application is designed to empower EV drivers by seamlessly connecting them with available charging stations in their vicinity.

This paper delves into the key features and functionalities of the EV Charging Station app, emphasizing its role in not only locating charging points but also streamlining the user experience through slot booking capabilities. Furthermore, the app transcends traditional charging station locators by offering a comprehensive trip planning feature. By inputting the source and destination, users receive a tailored roadmap, highlighting all relevant charging stations along the route.

In this era of sustainable transportation, the EV Charging Station app emerges as a pivotal tool, addressing the evolving needs of the growing electric vehicle community. This introduction sets the stage for a detailed exploration of the app's development, functionalities, and its potential impact on enhancing the convenience and efficiency of electric vehicle ownership.

2. LITERATURE SURVEY

[1]An in-depth analysis of electric vehicle charging station infrastructure, policy implications, and future trends,2022:

As the global transportation landscape undergoes a significant shift towards zero and ultra-low tailpipe emissions vehicles, the

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SURVEY PAPER ON FARMER PRODUCTS AUCTION SYSTEM

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ABSTRACT - The goal of our auction system is to provide farmers with fair value for their products, while also offering consumers a wider range of investment options. Our platform addresses the challenges faced by farmers in selling agricultural goods by eliminating intermediaries. This enables farmers to directly engage with consumers and receive better prices for their produce. Additionally, our system offers time-saving benefits for customers and allows companies to purchase agricultural products in larger quantities without the need for middlemen. To access the system, customers will log in using their unique IDs and passwords, gaining access to a variety of products produced by the farmers. Interested customers can participate in auctions, where products will be sold to the highest bidder.

KEYWORDS: Agro Products, Android, Auction System.

I. INTRODUCTION -

Agriculture stands as a primary occupation in India, constituting a crucial pillar of the nation's economy. Despite its significant role in the country's economic development, the contribution of agriculture to India's GDP has been on a consistent decline. One contributing factor is the limited autonomy of farmers in determining the prices of their produce, as market forces dictate these rates. Additionally, the government establishes minimum prices for specific agricultural products on a seasonal or annual basis. To address these shortcomings, we are in the process of developing an Android application that empowers farmers to set their own prices per kilogram for their products. This price will then be applied based on thequantity desired by the customer.

The driving force behind this project is to establish a platform that enables farmers to secure rightful profits for their produce. Despite their dedicated efforts, many farmers find themselves in dire financial straits, leading to instances of despair, including suicides. Furthermore, inadequate storage facilities often result in significant wastage of agricultural products[1]. To mitigate these challenges, our aim is to eliminate intermediaries and connect farmers directly with buyers through our application. This approach ensures that farmers reap the full benefits of their hard work and also helps reduce food wastage, as bulk purchasers, including companies, will have direct access to the products.

II. MOBILE APPLICATION DEVELOPMENT

"Mobile applications (Apps) have emerged as a significant innovation in the mobile industry and are widely adopted. This new mobile technology not only disrupts the traditional mobile business model but also opens up new opportunities in the mobile market. Mobile app development is a rapidly growing phenomenon due to the widespread use of smartphones by end-users. The mobile app market is characterized by intense competition. Smartphones and apps offer users distinct advantages, such as portability, location awareness, and accessibility[4]. As smartphone computing power continues to advance and mobile apps remain a dominant force in digital engagement, apps have become a new frontier for conducting field experiments.

In the realm of agriculture, the industry is becoming increasingly time-sensitive and data-driven. To enhance productivity, it's essential to adopt information-based decision-making systems. Manufacturers and software developers have been aligning their products with agricultural needs, creating specific solutions for the sector, supporting mobile phone technology for agricultural purposes. Information is a critical element in any agricultural activity, but its value is

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Review on Blood Bank Management System

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Abstract -.

The blood bank management system is a crucial tool for maintaining the inventory of blood donations and blood samples. In this paper, we propose the design and implementation of a blood bank management system using a Database Management System (DBMS) and Java Database Connectivity (JDBC). The system will help in the efficient management of blood donations and blood samples. The system will also allow for tracking of donor information, blood types, and inventory records.

The Blood Bank Management System (BBMS) is a software solution designed to efficiently manage blood donation, storage, and distribution processes. It includes modules for donor and recipient management, inventory tracking, donation scheduling, blood testing, distribution, and reporting. The system ensures secure access, accurate inventory control, and compliance with regulatory requirements, contributing to the effective management of the blood supply chain and improved patient care.

Key Words: Management Information System (MIS); Blood bank; donor; acceptors; Blood Bank Information System; administrator, Java Database Connectivity(JDBC).

1.INTRODUCTION

The Blood Bank Management System (BBMS) is a vital technological solution aimed at optimizing the operations of blood banks and ensuring a seamless and organized approach to blood donation, storage, and distribution. Recognizing the critical importance of an efficient blood supply chain in healthcare, the BBMS is designed to address the complexities involved in managing donor information, blood inventory, and the timely delivery of blood units to those in need.

In today's healthcare landscape, where the demand for safe and readily available blood is constant, the need for a robust and integrated management system is paramount. The BBMS serves as a comprehensive platform to streamline the processes associated with blood banking, from donor registration to recipient transfusion.

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Dyslexia Prediction using Deep Learning

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Abstract - Dyslexia, a neurodevelopmental disorder affecting reading and writing skills, poses significant challenges for individuals and educators alike. Early identification and intervention are important to reduce the impact on academic and personal development. This project focuses on leveraging deep learning techniques for the prediction of dyslexia, aiming to provide a reliable and efficient tool for early identification.

The proposed deep learning model utilizes a diverse dataset comprising linguistic and cognitive features, including but not limited to phonological awareness, rapid automatized naming, and working memory. Through a carefully designed neural network architecture, the model learns intricate patterns associated with dyslexia, allowing for accurate prediction.

Our approach involves preprocessing and feature engineering to enhance the model's understanding of dyslexia-related factors. The model is trained on a comprehensive dataset, and its performance is evaluated using various metrics such as sensitivity, specificity, and accuracy. Additionally, interpretability methods are employed to enhance the transparency of the model's decision-making process, providing insights into the key factors contributing to dyslexia prediction.

The significance of this project lies in its potential to provide a non-invasive, cost-effective, and scalable solution for dyslexia prediction. By incorporating state-of-the-art deep learning techniques, we aim to contribute to the advancement of early intervention strategies and support systems for individuals at risk of dyslexia. The outcomes of this research have the potential to positively impact education systems, fostering a more inclusive environment for learners with dyslexia.

Key Words: Deep learning , CNN , Python , Dyslexia, mental health, medical

1.INTRODUCTION

Dyslexia, a prevalent neurodevelopmental disorder, significantly impacts an individual's ability to acquire proficient reading and writing skills. This condition, often recognized during early schooling years, poses challenges that extend beyond the academic realm, affecting personal and professional development. Early identification of dyslexia is imperative for implementing timely interventions, yet it remains a complex task for educators and healthcare professionals.

In recent years, the integration of advanced technologies, particularly deep learning, has shown promise in enhancing our ability to predict and diagnose dyslexia effectively. Deep learning, a subset of artificial intelligence, offers the potential to discern intricate patterns within vast datasets, making it a compelling tool for the analysis of multifaceted factors associated with dyslexia.

This project endeavors to harness the power of deep learning techniques to develop a predictive model for dyslexia, aiming to contribute to the early detection and intervention strategies crucial for individuals grappling with this neurodevelopmental challenge. By using a diverse dataset that includes linguistic and cognitive features, the model aims to detect subtle but important indicators that may not be detected by traditional diagnostic methods.

The forthcoming sections delve into the methodology, dataset, and model architecture, providing a comprehensive overview of our approach. Through this research endeavor, we seek to offer an innovative and technologically-driven solution to advance the field of dyslexia prediction, ultimately fostering a more supportive and inclusive environment for those affected by this condition

2. Body of Paper

The literature on predicting and identifying dyslexia includes a wide range of research efforts, ranging from traditional assessments to cutting-edge technological

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An Online Web Portal for Donating Unused Medicine to NGOs

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Abstract : *- Many people in India live below extreme poverty. So, it becomes difficult for those people with low income to pay for their health care and medication. As a result, they live with a number of diseases and as a result, number of deaths increases daily. Apart from that, there are various people who are overdosing on drugs even after they have stopped their medication. Here, we have set up a website for donating medicines to NGOs. This program will help people in donating their unused medicines to NGOs and they can distribute them to people who need them. This site will help in reducing the cost of health services by making better use of unused drugs as well as helping poor or people with low income to get better healthcare. This site is also assisted in assessing the availability of essential medicines for nearby NGO's. The purpose of this project is to donate unused medicines. Unused medicine can be donated to the poor for further use. This application helps users donate unused medicines to NGOs. Administrators manage members by logging in and deleting and blocking users who have provided incorrect or expired medications. The administrator needs to confirm the expiration date of the uploaded image. NGOs help manage inventory and track available medications.*

Key Words: Distribution of Medicines, Website, NGOs, Health service.

1. INTRODUCTION

Life is an important issue in the human race. Recently, many people have suffered from health problems. In developing countries, health care is an essential part of life. Due to lack of doctors & paramedical staff, people in developing nations have limited access to health care facilities

[1]. Therefore, healthcare is in high demand in those nations. India is among the developing countries. India has developed public health and raisin programs and organizations in the private sector

[2]. Also, access to health services in India following the merger plays important roles: 1. India is a populous country. The population of India is around 1.38 billion by 2021. The population of India is 382 people per sq. km. 2. There are an estimated 1.34 doctors per 1,000 Indian citizens, as per the World Health Organization (W.H.O).

[3] 3. Poverty eradicates the well-being of the people and the poverty of the nation while creating public health fears. About 6.7% of the whole population of India lives under the country's poverty line (the mean income of 2 USD every day)

[4]. Because in these competitions, most people living below the poverty line don't pay for health care. Apart from the "drug dosage", it is the most important thing for most of them. Therefore, they cannot afford the good healthcare facilities and medicines, suffer from several types of illnesses, and several people donate their lives due to this issue. People living in extreme poverty can afford many types of medicines required and can also keep medicines for further use

[5]. Here, we intended to create a web site, which could help in collecting the unused medicines from donors through NGOs, & also provides for the low-income people or for those who can't afford good medical services and accredited physicians could suggest some medicines for low-income people who use this site. We also help monitor the availability of essential medicines for NGOs. Due to poverty, many people in the country are under-privileged and can't be able to buy costly medicine, and many people can't utilize the medicine properly. From the survey that we have created, we have seen that

86.9% of people feel that there should be a trusted platform

where they can donate their unused or leftover medicines and they also found our portal to be a trusted platform and they are ready to

donate the medicines on our portal and help the needy or poor people by donating medicines to them and then we can conclude that we have this reason as a major reason behind developing this web portal. We have kept an open survey as a discussion forum to hear about why people do not want to receive medicines from a trustworthy platform or a trusted web portal where some people discussed many reasons behind them and the main reason is the trust factor or expiry date validation. Also, People have many doubts on medicine expiry date so, we have decided to also create an algorithm for expiry date validation on the portal itself. Therefore, we are putting an expiry date validation restriction on medicines.

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Finite element analysis and design optimization of composite T-joints for enhanced maritime and aerospace applications

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ABSTRACT

Composite marine structures are crucial for maritime and aerospace applications due to their strength-to-weight ratio and corrosion resistance. To ensure their reliability and durability, a methodology to predict the damage criticality and service life of composite marine T-joints is essential. Finite Element Analysis (FEA) has emerged as a powerful tool for preliminary design and structural evaluation of complex structures, reducing the need for extensive experimental work and leading to substantial cost savings. This research project aims to conduct a comprehensive FEA of composite T-joints, considering alternative skin, core, and infill materials. Structural analyses under various loading conditions will evaluate overall deflection and stress levels, aiming to enhance the design and reliability of composite marine constructions, ultimately improving their performance and extending their service life in demanding maritime and aerospace environments.

1. Introduction

Composite marine constructions play a pivotal role in modern maritime and aerospace applications due to their extraordinary strength-to-weight ratio and corrosion resistance (Toftegaard & Lystrup, 2005). The dependability and durability of these structures are essential. To accomplish this, it is essential to develop a method for estimating the service life and reliability of composite marine T-joints by predicting their damage criticality (Mostafa et al., 2013).FEA has emerged as a potent instrument for the preliminary design and structural evaluation of complex composite structures (Kim et al., 2006). It has been demonstrated to precisely predict the behaviour of composite structures, thereby reducing the need for extensive experimental work and resulting in significant cost savings. The implementation of FEA prediction methodologies extends beyond maritime applications to the aerospace sector as well.In the past ten years, advances in FEA technologies have revolutionized stress analysis by providing precise and effective solutions. Nevertheless, the complex geometry of composite T-joints poses unique challenges to their analysis. Various Finite Element Method (FEM) programs offer optimized meshing techniques and accurate simulation of boundary conditions, which are essential to the success of Finite Element Analysis (FEA) in investigating critical stresses in composite T-joints. FEM enables the identification of critical stress concentrations and enables quantitative evaluations of stress distributions and deformations under varying loads (Shohel et al., 2023). Accurately conducting these investigations requires a comprehensive comprehension of FEM theory and intricate meshing procedures. In addition, it is crucial to ensure that actual boundary conditions are replicated accurately to avoid erroneous results. Addressing large-scale FEM problems necessitates a substantial amount of memory and disc space.

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Design and Testing of Composite Material T-Joint for Naval Ship Using FEA

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ABSTRACT

The preeminent defect that occurs in composite t-joint is the undefined failure at the joint which is the only complex part of the composite structure. Many researchers have done most of the studies to analyse how the t-joint fails and the failure conditions. Many attempts have been made to overcome this problem by CFD or by Finite Element Analysis approach to composite structure, but there is ample scope for modelling composite t-joint and the use of composite materials. The process to manufacture composite structures is a bit complex and requires skills. Composite t-joint is mainly crafted by casting or hand lay-up technique. The sandwich core is which supporting part is built by coating the PVC with glass fiber and epoxy resin. The resin binds with the glass fiber which eventually increases the stiffness of the PVC foam bond. Lamination of the core parts is a critical part in manufacturing of sandwich core. The adhesion of the resin should be strong enough to hold the structure together. The t-joint mainly fails due to the delamination of the core parts. Different angles are provided to the model to test which holds good to expectations. There is a need for lots of modification in modelling for the enhancement of the future of composite structures. The studies on different parameters and defects in composite T-Joint structures are widely used in superstructures, decks, bulkheads, advanced mast sensor systems, propellers, aircraft carriers, propulsion shafts, pipe, pumps, valves, machinery, etc. Four different categories have been distinguished to study defects in composite T-Joint and the effect of various parameters

Keywords: Composite Material, Design, Material selection and FEA of Composite T-Joint

I. INTRODUCTION

The purpose of the project is to determine the methodology to predict the damage criticality of a composite marine structure T-joint. This knowledge will enable the prediction of the life and reliability of the structure. To acquire this, it is very useful to do the preliminary design using a FE package. The FE tool has been proved useful in predicting the behavior of composite structures. It allows for cost savings by reducing the amount of required experimental works. The FE prediction methodology is very commonly used on composite structures for not only marine structures but also for aerospace applications. Since last decade, with the advent of powerful finite element analysis (FEA) packages, these have been proven good tool to perform accurate

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POWER GENERATION BY SCREW TURBINE WITH DIFFERENT ANGLE OF INCLINATION

Dr. Prathamesh S. Gorane*1, Dr. Vijay B. Roundal*2, Prof. Sachin S. Yadav*3, Mr. Ganesh V Patil*4, Mr. Shubham Sagar*5, Mr. Pravin Panchal*6

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ABSTRACT

Potential energy from fluid flow of small rivers or irrigations could be extracted become electricity by using screw turbine. India has more than 600 rivers. It is difficult to construct dams on any type of river. This turbine is promising because the advantages of ultra-low head and fish friendly. Experimental performance of screw turbine for ultra-low head hydro resource is presented in this paper. The screw turbine with an outside diameter of 142 mm and the water flowrate of 1.2 l/s with the head of 0.25 m, can produce maximum power 1.4 W with 49% efficiency at 22° angle of inclination. This turbine has one blade screw and screw turbine experiment apparatus is made by using locally available materials. The screw turbine has shown good potential to be used for low head micro hydro-electric installations. This paper reports on a performance analysis based on the experimental data collected from different performance tests carried out on some inclination angle position of screw turbine prototype.

Keywords: Eco Friendly; Low Head; Renewable Energy; Screw Turbine; Electricity

I. INTRODUCTION

Due to awareness about the importance of a sustainable environment, the role of renewable energy has been recognized as great significance for the global environmental concerns. One example of renewable energy is hydropower in which its potential application to future power generation cannot be underestimated. Particularly in lower head hydro resource, the cost of the commercially available low headwater turbine is considerably high per kilowatt output, more research need to be done on lowering the cost of these low head hydropower systems. Depending on fossil fuel energy should be decreased and substitute with renewable energy resources. Any kind of green energy source becomes research object such as solar, wind, water, geothermal and biomass nowadays [1]. Any small contribution of renewable energy source will influence the percentage of energy mix that use around the world.

Among the renewable energy resources, energy from water in mini/micro hydropower has gained the highest attraction due to its environmental friendly operation. Water energy is of great importance for sustainable future because it is a clean, cheap and environmental friendly source of power generation [2]. Particularly in lower head, itcan be the best economical option for remote area electrification in developing countries [3].

Around the world, there are many sources of hydropower in the form micro or Pico hydropower from low head river or irrigation have not been exploited yet. In developing country such as Indonesia, from 400 MW potential capacity of micro hydro power, only around 1.8 % of potential micro hydro power which exploited for power generation [4], while many areas are still lack of electricity particularly in rural areas. Application screw turbine as micro or Pico hydropower generation will solve that problem and it can increase electricity ratio around this country. This paper highlights the development of screw turbine and present the experimental performance of screw turbine for ultra-low head hydro resource. This paper reports performance of screw turbine based on experimental data collected from some inclination angle position of screw turbine. Furthermore, discussion about the challenges and opportunities for promoting screw turbine as alternative renewable energy technologies is also included in this paper, followed by conclusion with recommendations for development of screw turbine.

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DESIGN AND MANUFACTURING OF SMART SOLAR PANEL CLEANING SYSTEM

Dr. Prathamesh S. Gorane*1, Dr. Vijay B. Roundal*2, Prof. Sachin S. Yadav*3, Mr. Mohit Basutkar*4, Mr. Kamlesh Patil*5, Ms. Neha Pandey*6, Mr. Kiran Patil*7

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ABSTRACT

Dust and dirt particles accumulating on PV panels decrease the solar energy reaching the cells, thereby reducing their overall power output. Hence, cleaning the PV panels is a problem of great practical engineering interest in solar PV power generation. In this paper, the problem is reviewed and methods for dust removal are discussed. A portable robotic cleaning device is developed and features a versatile platform which travels the entire length of a panel. An Arduino microcontroller is used to implement the robot's control system. Initial testing of the robot has provided favourable results and shows that such a system is viable. Future improvements on the design are discussed, especially the different methods of transporting the robot from one panel to another. In conclusion, it is found that robotic cleaning solution is practical and can help in maintaining the clean PV panel efficiency.

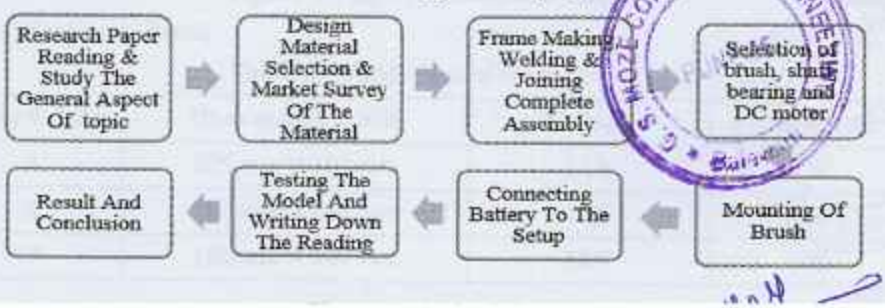
Keywords: Solar Panel, Dust, Dirt, Solar Energy, Efficiency improvement.

I. INTRODUCTION

Most of the applications nowadays like heating water, agriculture and industrial applications use the solar panels as an electrical power source instead of relying on the generators or the ordinary sources for electricity. The most important part of these systems is the solar panel where the solar energy is converted to heat for water heating or converted to electricity for the others. There are many types of the solar panels. In the countries those have dusty environment accumulation of dust on the solar panels leads to reduction of the transmittance of the panel. Solar plants in some of the middle east countries like the solar desalination plant of Abu Dhabi suffer from the deposition of dust on its solar plates. The effect of the accumulated dust will be reduced with the increasing of tilt angle since the tilt angle will affect the exposure time to the sunlight also. But the best way to eliminate the effect of the accumulated dust on the solar panels is to clean the panels. Cleaning the solar panels is normally by washing which is tedious and cumbersome and also expensive in terms of the labor involved and time. In practice cleaning of solar panels should be frequently done which makes the process more expensive. Hence in this project an innovative method of automatic cleaning of solar panel has been proposed. The method involves the Mechanical and Electric sections. The Mechanical element includes DC motor controlled through a power unit which moves a cleaning head on the panel upwards and downwards without or with the use of liquid spraying structures.

II. METHODOLOGY

Below is the framework which describe our methodology for this project.



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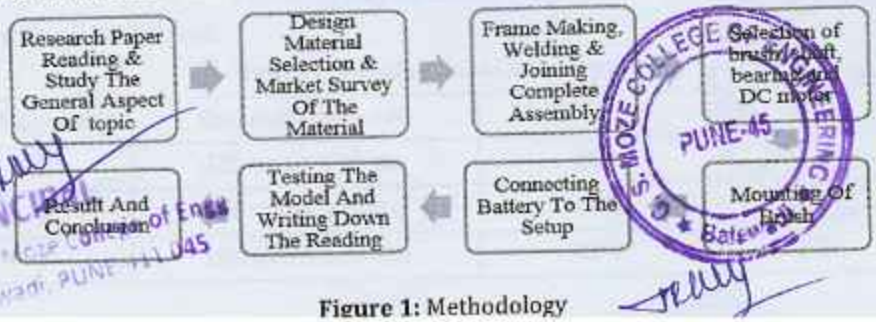

Figure 1: Methodology

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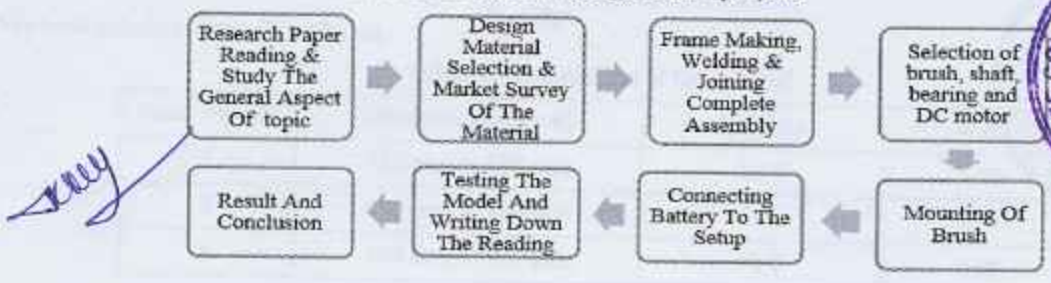

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DESIGN AND MANUFACTURING OF PEANUT SHELLER MACHINE

Dr. Prathamesh S. Gorane*1, Dr. Vijay B. Roundal*2, Prof. Sachin S. Yadav*3, Mr. Akshay VPatil*4, Mr. Tejas R. Shinde*5, Mr. Shubham Chandure*6, Mr. Santosh Kumbhar*7

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ABSTRACT

Groundnut product demand is on the increase and the application is largely dependent on the cleanness of the nuts. The separation process is usually an energy sapping task that requires a lot of time. In order to separate the nuts from its shell effectively a shelling machine was developed. The machine employs an auger screw as a means of breaking the groundnut pod. The machine basically comprises of shelling chamber, separating chamber and a motor. The arrangement of these parts is connected by a compound belt of type B standard V-belt. The concept of Design and manufacturing of Peanut Sheller Machine is mainly used for Farming and small scale industries. Farmers are mainly used peanuts for seeding and now days good quality seeds are not available he tried used old seeds for grow new and in industry peoples are convert peanuts into salted and toasted peanuts. Today in this world every task has been made quicker and easier by making use of technology advancement but this advancement also demands huge investment and expenditure. Every industry tries to achieve high productivity maintaining the quality and standard of the product at low average cost.

Keywords: Groundnat; Shelling; Design; Manufacturing; Techonology.

I. INTRODUCTION

One of the important processes involved in the production of groundnut is shelling and separation. Peanut shelling machine is the machinery to remove the shell of peanuts to get peanut kernels. Due to the characteristics of the peanut itself, the peanut shelling machine can not used for joint operations with peanut field harvesting. It can only be used after the moisture content of peanuts reducing to a certain degree. Shelling is the removal of the groundnut seed from its pod by impact action, compression and shearing or combination of two/more of these methods. The shelling operation is majorly divided into two, namely: traditional and mechanical methods. The traditional shelling could be by stick beating, animal trampling or pod pressing by hand. Pod pressing is mostly practiced in Nigeria and it has low efficiency, high energy requirement, time wastage, high labour and fatigue.

Agriculture is the back bone of the Indian economy. Many of the farmers work day and night for growing the crops. According to the seasonal conditions farmers plant variety types of crops, in that groundnuts is one of them. Arachishypogaea is the scientific name of groundnuts. It comes under the family of fabaceae. The favorable condition for growing this crop is dry climate. Around 7600 years onwards this crop is being cultivated. Earlier it was found in Peru because of its climatic conditions. This plant grows to a height of 30cm to 50cm. The main parts of the groundnut are shell, cotyledon, seed coat, radicle and plumule. Groundnuts has many pros such as food purpose (peanut oil, peanut butter, peanut flour, Boiled nuts etc.,). Malnutrition is reduced with the help of groundnuts because it has more energy and proteins. Groundnuts are useful for obtaining the oils. While extracting oil from the groundnut the waste produced is feed to the animals. It is used in many industrial applications such as paints, lubrication oil, vanish, leather dressing and furniture polish. It is also used for cooking oil purpose. Even though there are so many advantages, groundnut shelling is a major problem in India. In this project, we designed and developed a small machine to peel out the shell of groundnut so that farmers can reduce their labour cost and processing time and high profit by selling the groundnut. The main motto of the design is to remove the pods from the roots of the plants and peel out the nuts from the shell. This equipment is eco-friendly and also have less maintenance cost. The cycle rim we used is to separate the pods from the plant and rotor to remove the shell of the ground nut. For the

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ABSTRACT

Groundnut product demand is on the increase and the application is largely dependent on the cleanness of the nuts. The separation process is usually an energy sapping task that requires a lot of time. In order to separate the nuts from its shell effectively a shelling machine was developed. The machine employs an auger screw as a means of breaking the groundnut pod. The machine basically comprises of shelling chamber, separating chamber and a motor. The arrangement of these parts is connected by a compound belt of type B standard V-belt. The concept of Design and manufacturing of Peanut Sheller Machine is mainly used for Farming and small scale industries. Farmers are mainly used peanuts for seeding and now days good quality seeds are not available he tried used old seeds for grow new and in industry peoples are convert peanuts into salted and toasted peanuts. Today in this world every task has been made quicker and easier by making use of technology advancement but this advancement also demands huge investment and expenditure. Every industry tries to achieve high productivity maintaining the quality and standard of the product at low average cost.

Keywords: Groundnat; Shelling; Design; Manufacturing; Techonology.

I. INTRODUCTION

One of the important processes involved in the production of groundnut is shelling and separation. Peanut shelling machine is the machinery to remove the shell of peanuts to get peanut kernels. Due to the characteristics of the peanut itself, the peanut shelling machine can not used for joint operations with peanut field harvesting. It can only be used after the moisture content of peanuts reducing to a certain degree. Shelling is the removal of the groundnut seed from its pod by impact action, compression and shearing or combination of two/more of these methods. The shelling operation is majorly divided into two, namely: traditional and mechanical methods. The traditional shelling could be by stick beating, animal trampling or pod pressing by hand. Pod pressing is mostly practiced in Nigeria and it has low efficiency, high energy requirement, time wastage, high labour and fatigue.

Agriculture is the back bone of the Indian economy. Many of the farmers work day and night for growing the crops. According to the seasonal conditions farmers plant variety types of crops, in that groundnuts is one of them. Arachishypogaea is the scientific name of groundnuts. It comes under the family of fabaceae. The favorable condition for growing this crop is dry climate. Around 7600 years onwards this crop is being cultivated. Earlier it was found in Peru because of its climatic conditions. This plant grows to a height of 30cm to 50cm. The main parts of the groundnut are shell, cotyledon, seed coat, radicle and plumule. Groundnuts has many pros such as food purpose (peanut oil, peanut butter, peanut flour, Boiled nuts etc.,). Malnutrition is reduced with the help of groundnuts because it has more energy and proteins. Groundnuts are useful for obtaining the oils. While extracting oil from the groundnut the waste produced is feed to the animals. It is used in many industrial applications such as paints, lubrication oil, vanish, leather dressing and furniture polish. It is also used for cooking oil purpose. Even though there are so many advantages, groundnut shelling is a major problem in India. In this project, we designed and developed a small machine to peel out the shell of groundnut so that farmers can reduce their labour cost and processing time and high profit by selling the groundnut. The main motto of the design is to remove the pods from the roots of the plants and peel out the nuts from the shell. This equipment is eco-friendly and also have less maintenance cost. The cycle rim we used is to separate the pods from the plant and rotor to remove the shell of the ground nut. For the preparation rotor we used arc

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DESIGN AND MANUFACTURING OF PEANUT SHELLER MACHINE

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Numerical Analysis to Investigate the Effect of Solidification Parameters on the Pull-In Effect of Continuous Casting

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Digital Economys contribution in Indias Sustainable Economic Reinforcement

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Abstract

This study investigates the role of the digital economy in enhancing India's sustainable economic development. The overall goal of this research is to aid the government in selecting the best policy for implementing the digital economy and its impact on long-term economic development, particularly in India. In India, the digital economy has grown rapidly in the sphere of ecommerce. The ecommerce sector involves more than just purchasing and selling goods and services via the internet. However, it also includes inter-service providers, telecommunications providers, and other entities. This is why the ecommerce industry must change in order to keep the economic momentum flowing further. The government is presently declaring India to be the largest digital economy in the world by 2025, with the goal of becoming the largest in Southeast Asia. The digital sector is one of the declaration's foundations of national growth. By 2023, the government hopes to have INR 2800 crores in ecommerce transactions and 1,000 technopreneurs (Technology Entrepreneurs) with a company worth of 1000 crores. As a result, this research will provide policy benefits by reinforcing state institutions in order to control the implementation of the digital economy in India, which will have a positive impact on the community's ability to prosper while also having a favorable effect on the environment and rising financial benefit.

Keywords: Sustainable Economic development, Digital Economy, ecommerce

1. Introduction

The digital economy arose and evolved as the world's usage of information and communication technology became increasingly worldwide. The digital economy's wave has a sloping topography that is inclusive and stretches the quality of opportunities. This trait includes the concept of rivalry, which is an industrial spirit that may be readily boosted by businesses that emphasize collaboration and synergy. As a result, the digital economy is a "sharing economy," allowing many small and medium-sized businesses to reach the global market. The term "digital economy" refers to the future development and economic growth that is distinguished by the rapid development of business or trade transactions that use the internet as a medium for communication, collaboration, and cooperation between companies or individuals. "(Tapscott, 1997) first introduced the concept of digital economy, which is a socio political and economic system with the characteristics of an intelligence space, including information, various information access instruments, information capacity, and information processing. The ICT industry, e-commerce operations, and digital goods and services distribution were designated for the first time as components of the digital economy. In India, the digital economy has grown rapidly, particularly in the sphere of ecommerce. The ecommerce

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Development and Evaluation of Extended Text Pre-processing Techniques for Hindi Document Clustering.

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Abstract: Data pre-processing, which involves cleaning and converting raw text data into an appropriate format for analysis, is a vital stage in text analytics. Clustering is a widely used technique in text analytics for grouping similar data points. However, the pre-processing techniques applied to the data can greatly influence the quality and effectiveness of clustering results. The goal of this study is to examine how the pre-processing methods that has been suggested affects clustering algorithm performance. Several distinct combinations of pre-processing methods have been applied to produce document clustering. The goal was to identify the optimal pre-processing combination that produces the most accurate and meaningful clusters. The effects of the clustering technique are assessed after applying the Normalized Mutual Information (NMI), silhouette score, and Adjusted Rand Index (ARI). Principal Component Analysis (PCA) and dendrograms are two visualization techniques explored in this study to gain insights into the clustering results. The findings from this study can help enhance our understanding of the pre-processing techniques required in the clustering process and help researchers and practitioners implement clustering algorithms to achieve greater accuracy.

Keywords: Pre-processing, feature extraction, Tokenization, Stopwords, Lemmatization, Hindi Document Clustering

1. Introduction:

In many fields, including text mining and information retrieval, text analytics is essential. Text data often contains noise in the form of punctuation, special characters, HTML tags, URLs, and other irrelevant information [1]. Pre-processing methods such as stripping HTML tags and deleting special characters and stop words can help minimize noise and focus on important content. It improves the accuracy and effectiveness of text analytics algorithms and enables meaningful extraction of features and insights from the text corpus [2,3]. The most common methods for text pre-processing comprise tokenizing text, removing Stop words, stemming and lemmatization, special characters removal, and case conversion [4,5]. Eliminating stop-words helps to get rid of frequently used words that have no meaning in a text. These words are mostly articles, prepositions, and conjunctions. Lemmatization is another pre-processing step to break down the word to its basic form [4-8]. The quality of the pre-processing methods used in the data has a significant impact on how clustering algorithms perform. Eliminating words that are often used but are less relevant minimizes the dimensionality of the data. The effectiveness and computational performance of clustering algorithms can be enhanced by this pre-processing, making them more scalable and manageable, especially for large datasets [10-15]. There are many opportunities for text analytics in Indian languages due to the availability of various forms of domain-specific data. In the Hindi language, some words like "रह" (Rah) meaning "stay", "तू" (Tu) meaning "you", "मै" (Mai) meaning "I", "वो" (Voh) meaning "they", "थे" (The) meaning "were", "था" (Tha) meaning "was", and "वह" (Vah) meaning "he" are examples of stop words. These phrases are commonly used in the corpus and have no particular significance. Removing stop words reduces corpus size, thereby saving CPU cycles and memory, which ultimately reduces model training time [7]. After the stop words are removed, the next step is lemmatization, which is carried out to bring the word to its base form [9]. For instance, the word "ले" (lene) meaning "pick up" is converted to its base form "ल" (le) meaning "take" after performing lemmatization on the corpus. In the process of pre-processing Hindi data, Python libraries often ignore Hindi stop words that are not included in their vocabulary. However, identifying custom stop words and lemmatized words can further reduce the size of the data. In this research, we performed document clustering on the Hindi BBC news article dataset[1] with three clustering methods: Gaussian mixture models, Hierarchical Agglomerative Clustering (HAC) and K-means. To ensure that our pre-processing aligns with the goals and requirements of our analysis, we manually select custom stop words. This allows us to consider the context and significance of certain words that may not be captured by basic available stop word list. We use python's the Indicnlp library for tokenization and the StanfordNLP library for lemmatization. Additionally, we utilize a basic stopword list that includes stop words,

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An ICT based collection development model for engineering college's libraries: Challenges and problems

Monali Sharad Jadhav, Sharad Sopanrao Jadhav and Dr. Giridhar U Dhawle

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Abstract
The paper highlights the current issues in acquisition and procurement of printed and digital resources in order to find out challenges and problems in Collection development in the ICT Environment in Engineering College Libraries. Collection Development in the ICT environment is still more challenges are increased due to the extensive information generated in print and digital form in engineering and technology area. There is need to integrate both print and electronic resources and also making changes in collection development practices in Engineering College Libraries. The main key issues are identified for redefining a collection development policy (CDP) include issues like balancing Ownership verses Access and Cooperative efforts and Evaluation.
The main aim of the collection development is to acquire and procurement of print and digital resources in order to provide integrated access to print and e-resources to the users in single window.

Keywords: Engineering college's libraries, challenges and problems, acquisition

Introductions
We live in an information age. It is estimated that the amount of information is doubling every year due to the information explosion. The amount of published information in different formats especially digital and print affects of availability of data. The problem of managing the information becomes more difficult, which can lead to information overload. So librarians asked one of the questions for which an answer should be sought: What does the future hold for collection development in libraries and information handling organizations? At this connection, it would be appropriate to recall the functions that relate to collection development specifically selection, acquisition, preservation, policy- making, collection evaluation, etc. one can see that while collection development is perceived as a concept more appropriate to earlier times of expansion in higher education and engineering college libraries and implies building and growing, dealing with selection and acquisition of library materials. Collection management now is a more demanding concept which goes beyond a policy of acquiring materials, to policies on housing, preservation, storage, weeding and discard of stock. Rather than selection and acquisition, collection management emphasizes the systematic maintenance and management of the library's existing collection.
Collection development is the process of planning and acquiring a balanced collection of library materials in a variety of formats such as books, periodicals and digital resources. Collection Development becomes more complex due to new technologies and formats. Collection development in print and digital resources is based on good combinations of Selection and acquisition of e-resources, type of e-resources, tool used to select e-resources, criteria for selection of e-sources, methods to acquire e-resources, user needs from e-resources.

Why Need for ICT based Collection Development?
All India Council for Technical Education (AICTE) is a parent organization of engineering college libraries in India and also developed norms and guidelines for print collection and e-library. AICTE has recommended up to 66% the total numbers of titles and volumes may be in the form of e-books in the nearest collection of libraries and the amounts that a resource

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Gas Sensor Array Drift in an E-Nose System: A Dataset for Machine Learning Applications

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Abstract— Gas sensor arrays are widely used in various applications such as environmental monitoring, industrial process control, and medical diagnosis. However, one of the main challenges in using gas sensor arrays is their tendency to drift over time, which can significantly affect their accuracy and reliability. In this research paper, we present a gas sensor array drift dataset that can be used to evaluate and develop drift compensation techniques. The dataset consists of measurements from an array of eight metal oxide gas sensors exposed to six different target gases at varying concentrations over several months. The paper also describes the experimental setup, data acquisition process, and preliminary dataset analysis. Our results show that the sensor array exhibits significant drift over time and that the drift patterns vary depending on the target gas and concentration. This dataset can provide a valuable resource for researchers and engineers working on gas sensor array applications and can help advance the development of more robust and accurate gas sensing systems.

Keywords- Gas Sensor, VOC, PCA, Datasets, ANN.

I. Introduction

Gas sensors are widely used in various industrial and domestic applications to detect and monitor the presence of multiple gases. However, one of the significant challenges in gas sensing is the drift phenomenon, which leads to sensor performance degradation over time. Various factors, such as changes in environmental conditions, ageing of the sensor material, and sensor poisoning, cause drift. To address this challenge, researchers have developed gas sensor arrays that consist of multiple gas sensors with different sensing materials and operating principles. These arrays can compensate for the drift by analysing the response patterns of various sensors and extracting the relevant information.

In this research paper, we present a gas sensor array drift dataset that we have collected and analysed. The dataset consists of the responses of a six-sensor array to 11 different volatile organic compounds (VOCs) over 12 months. The sensors were exposed to the VOCs in a controlled environment, and their responses were measured at regular intervals. The research has also analysed the dataset to understand the drift phenomenon and its impact on the sensor array's performance. We have investigated the temporal stability of the sensor responses and their correlation with the VOC concentrations. Furthermore, we have evaluated the performance of various data preprocessing techniques and classification algorithms in detecting and compensating for the drift.

The gas sensor array drift dataset presented in this paper can serve as a benchmark for evaluating and comparing the performance of gas sensor arrays and drift compensation techniques. [1] Researchers and practitioners can use the publicly available dataset to develop and validate new approaches for improving gas sensing performance.

II. Related Work

Gas sensor array drift is a significant challenge in electronic nose (e-nose) systems. To address this issue, various studies have been conducted to investigate the underlying causes of drift and propose solutions [2]. Here are some related works on gas sensor array drift in e-nose systems:

"Development and application of a new low cost electronic nose for the ripeness monitoring of banana using computational techniques (2014): This study proposed a method for compensating for sensor drift in e-nose systems using principal component analysis (PCA). The authors found that the primary source of import was temperature and humidity changes and showed that PCA could effectively remove the drift signal from th.e sensor data" [3]

"Domain adaptation extreme learning machines for drift compensation in E-nose systems (2014): This study proposed a

HUMAN-COMPUTER INTERACTION USING MACHINE LEARNING

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Author

Keywords: Human-Computer, Interaction, Machine Learning, Connection, points, profound

Abstract

Lately, signal acknowledgment and discourse acknowledgment, as significant information strategies in Human-PC Connection (HCI), have been generally utilized in the field of augmented reality. Specifically, with the fast improvement of profound learning, man-made brainpower, and other PC innovations, signal acknowledgment and discourse acknowledgment have accomplished advancement research progress. The hunt stage utilized in this work is for the most part the Google Scholastic and writing data set Snare of Science. As per the catchphrases connected with HCI and profound learning, for example, "shrewd HCI", "discourse acknowledgment", "signal acknowledgment", and "regular language handling", almost 1000 investigations were chosen. Then, at that point, almost 500 investigations of examination strategies were chosen and 100 examinations were at long last chosen as the exploration content of this work following five years (2019-2022) of year screening. To start with, the momentum circumstance of the HCI wise framework is dissected, the acknowledgment of signal cooperation and voice connection in HCI is summed up, and the benefits brought by profound learning are chosen for research.

Then, at that point, the center ideas of signal association are presented and the advancement of motion acknowledgment and discourse acknowledgment connection is broke down. Moreover, the agent uses of signal acknowledgment and discourse acknowledgment association are portrayed. At last, the ongoing HCI toward regular language handling is explored. The outcomes show that the mix of smart HCI and profound learning is profoundly applied in signal acknowledgment, discourse acknowledgment, feeling acknowledgment, and canny robot heading. A wide assortment of acknowledgment techniques were proposed in related research fields and confirmed by tests. Contrasted and intuitive strategies without profound learning, high acknowledgment exactness was accomplished.

In Human-Machine Connection points (HMIs) with voice support, setting assumes significant

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Review of CaRP: CAPTCHA as Graphical Passwords

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ABSTRACT

For Different security purposes, many security systems are used now a day. For number of applications. Authentication is usually done with text-based passwords. The best alternative for text based password is graphical password. This paper is focuse on how to increase the security by using CAPTCHA technique with the graphical passcode. CAPTCHA: Completely Automated Public Turing test to tell Computers and Humans Apart is a technique to identify whether user is a human or a robot. To protect the website from bots CAPTCHA is used as image or a program ie computer generated program. As a graphical passcode, CAPTCHA: CaRP is focused on the CAPTCHA system. CaRP system is the combination of both graphical password and Captcha, it having advantages of both. So many security problems are solved by using this technic such as shoulder-surfing, relay, online guessing etc. CaRP also conquer the disbenifits of graphical passcode system. Mostly occured problem of graphical password is Image hotspot problem which is prevented in CaRP system. The CaRP method looks to integrate well with similar practical applications for improving internet security and delivers reasonable security and accessibility.

Keywords-- CAPTCHA, Captcha Generation, CaRP, Dictionary Attack, Graphical Passcodes, Hash Functionality, Passcode Guessing Attack, Random Passcodes.

INTRODUCTION

Authentication is the nucleus i.e. most important part of any secure system. Any computer transaction or the creation of a secure cryptographic account requires authentication [1]. In case off-base user_ID and secret word (passward) is entered, the unauthorized get to is conferred to an off-base character, the entire security system will come crashing down. By and large, the conventional alpha-numeric secret word is most common and helpful verification strategy.

However, because of their inherent security and convenience issues, graphical passwords have become an optional option. Fundamentally, there are three sorts graphical passcode schemes [5], ie Recognize based system, Pure Recall based systems, Cued Recall based system [6]. They have overcome a few downsides of alpha-numerical secret word schemes, but most of the current graphical secret word schemes stay powerless to spyware attacks [2].

Clients must enter the secret word by clicking or sketching in the Cued Recall graphical password system. CAPTCHA (Completely Automated Public Turing tests to tell Computers and Humans Apart) could be a programme i.e. code that creates the distorted picture that can be recognised by a person rather than a computer programme. CAPTCHA is presently nearly a standard security component for minimizing unfavourable situations or pernicious Web bot programme. The major web destinations such as Google, Yahoo and Microsoft utilize CAPTCHAs for security and all have their possess CAPTCHAs [3].

A basic task in a security is to create a well-established and low level algorithm that are computationally hard to control. These algorithms are frequently used to build cryptographic protocols for computer security system. Under

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Analysis & Optimization to Improve the Tedious Tender Process in Civil Construction Industry

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ABSTRACT- The tender evaluation processes requires the development of necessary and sufficient criteria. Selecting a suitable contractor to execute a particular project is an important decision for the client to take. Awarding construction contracts based on the price only is not always a successful strategy as it could result in construction delays and cost overruns. The decision to bid is a major financial decision because of two reasons. First, the contractor assumes substantial costs for the preparations of the estimates and the tender at the risk of not recovering them if he is not awarded the job. Second, and most importantly, the contractor commits himself to investment in the construction of the project if he wins the tender.

1.1 Introduction

Building construction estimating is the determination of probable construction costs of any given project. Many items in influence and contribute of the cost of project, each item must be Analyzed, qualified, and priced because the estimate is prepared before the actual estimate. Construction ,much study and thought must be put into the construction document. The Estimator. Who can visualize the project and accurately determine its cost will become one of the most important. Persons in any construction company. For project constructed with the design-tender-built (DBB) delivery system, it is necessary for contractors to submit a competitive cost estimate for the project. The competition in construction tendering is intense with multiple firms vying for a single project. To say in business, a contractor must be the lowest-qualified tenderer on a certain number of projects, while maintenance an acceptable profit margin. This profit margin provides the general contractor an acceptable rate of return and competition for the risk associated with the project. Because the estimate is prepared from the working drawing and the project manual for a building the ability of the estimator to visualize all of the different phases of the construction project becomes a prime ingredient in successful tendering The working drawing usually contain information relative to the design, location dimension and Construction of the project, while the project manual is a written supplement to the drawing and Includes information pertaining to materials and workmanship, as well as information about the Tendering process. The working drawing and the project manual constitute the majority of the contract documents, define the scope of the work, and must be considered together when preparing an estimate. The two complement each other, and they often overlap in the information they convey. The tender submitted must be based on scope work provided by the owner or the architect. The estimator is responsible for including everything contained in the drawings and the project manual in the submitted, because of the complexity of the drawing and the project manual, coupled with the potential cost of an error, the estimator must read everything thoroughly and recheck all items. Initially the estimator can begin the process of quantifying of all the materials presented. Every item included the estimate must contain as much information as possible. The quantities determined for the estimate, will ultimately be used to order and purchase the needed materials. The estimated quantities and their associated projected costs will becomes the basis of project controls in the field. Estimating the ultimate cost of a project required the integration of many variable . These variables fall into either direct field costs or indirect field costs are also referred to as general conditions or projects overhead cost in building construction. The direct field costs are the material, labor equipment, or subcontracted items that are permanently and physically intergraded into the

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Home Security System using Arduino Uno (Implementation)

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Abstract: ***The Project is an implementation of the IOT based home security system, which is able to secure homes and make people feel safe and can be bought by almost everyone. The Major aim of the Project was to be cost efficient and simultaneiusly it should be secure, and this was accomplished with the use of internet of things and other electronics component. With the help of an LDR sensor and a keypad a working automatic door system was achieved.. IoT refers to the infrastructure of connected physical devices which is growing at a fast rate as a massive number of devices and object are getting connected with the internet. Home Security is a very important and useful tool of the IoT and we used it to build a low cost security system for homes which can be used by almost everyone.***

Keywords: Arduino , ESP32 CAM

I. INTRODUCTION

During the previous years, Internet was known as a big form from where we could obtain data. Embedding components into everyday items and gadgets and allowing them into new methods of communication between people, and communication of people with things.. IOT has a very great optimistic impact on our lives. IOT has many meanings from several perspectives, however they all revolve around swapping, gathering and communications between the different things and 'people with things with the assistance of the internet. The idea of the smarter life IOT has the capacity and potential to soon have various applications in making smart home security promising. which starts from fundamentally watching different parts of home, to actually adjusting them. The combination of IOT and home security has made it possible to secure homes from anyplace in the world. The IoT or Internet of Things is devoted to the network in which there are connected and other physical objects that can connect and exchange data among them without the need of any human interfering. It has been well-defined as the "Infrastructure of Information Society", because IoT allows us collect information from practically all kinds of means such as humans, automobiles, kitchen utilities, etc. So anything that is there in the physical domain which can be given an IP address to agree to data transmission on a network can be made a part of the IoT systems, by implanting or using them with different kinds of electronic hardware such as sensors and software and networking equipment. IOT is not alike the internet as it only uses internet to connect to our day-to-day devices which are implanted with circuits to communicate and interrelate with each other using the internet structure. The possibility of IOT applications and project and developed tremendously as it contains more than 200 crores and will grow further with improvement and development in this field.

II. ARDUINO UNO

Arduino Uno, it is a microcontroller which is based on the ATmega328P. it has 14 digital input/output pins after which 6 of those can be used as PWM outputs, then a 16 MHz quartz crystal, it also has 6 analog inputs, it consists of an ICSP header and also a reset button, it has a USB connection and a power jack.

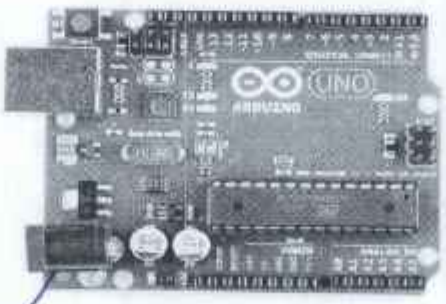

Figure 1: Arduino UNO

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DETECTION OF SKIN CANCER DISEASE USING DEEP LEARNING ALGORITHM

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Sapna Kiran More, Nikita Babaji Wadekar
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***Abstract*: Early detection of melanoma skin cancer is important for a person effective treatment. Recently, it is well-known that the most dangerous type of skin cancer is other types of skin cancer.Melanoma because it may spread to other are asif you are not diagnosed and treated early. Non-invasive computer vision or medical imaging play an important role in the clinical identification of various diseases. Such techniques that provide an automatic image analysis tool for accurate measurement and quick wound testing. Steps involved in this. The study collects dermos copy image data, preliminary processing, division using threshold, mathematical element domain using Gray Level Co-occurrence Matrix (GLCM), Asymmetry, Border, Color, Scope, (ABCD) etc., feature selection using Principal section (PCA)), to calculate the value Dermos copy Score then differentiate using Convocation neural network (CNN).the results show that the accuracy of the categories obtained is 92.1**

Keywords: **CNN (Convolutional Neural Network), YOLOv3(Grey level co-occurrene matrix), Skin Cancer.**

I. INTRODUCTION

Skin cancer is a serious disease. The skin has three basic layers. Skin cancer begins in the outer layer, consisting of the first layer of squamous cells, the second layer of basal cells, and the inner or third melanocyte cells Squamous cells and basal cells are sometimes called non-melanoma cancers. Non-melanoma skin cancer is always responsive to treatment and rarely spreads to other skin tissues. Melanoma is more dangerous than most other types of skin cancer .if it is not detected early, it quickly invades nearby tissues and spreads to other parts of the body. The official method of skin cancer diagnosis is the Biopsy method. A biopsy is a procedure to remove a piece of tissue or a sample of cells from a patient's body for analysis in a laboratory. It is an uncomfortable way.

The existing system is a time-consuming process, and it is very difficult to find it in its early stages as its symptoms appear only in the advanced stages. Using an automated separation procedure to diagnose skin cancer early.

II. LITERATURE SURVEY

1. Name of the Paper: Using Alternative Data Mining Methods for Pre-Skin Cancer Screening
Author's Name: Zakaria Suliman Zubi and Rema AsheibaniSaad.
Abstract: skin cancer is a disorder characterized by uncontrolled growth of skin cells, and skin cancer is one of the most common and deadly diseases in the world. Early detection of skin cancer is key to its treatment. In general, the rate of early stage skin cancer diagnosis mainly includes those used, CT, MRI, etc. Medical imaging mine is a promising field of computer intelligence used to automatically analyze patient records aimed at obtaining new information that may be helpful in a medical decision. to do. First we will use some of the most important processes in the field of medical imaging, Pre-Data Processing, Feature Release and Legal Production. The methods used in this paper work are to divide digital X-ray films into two categories: standard and non-standard. A common condition is one that produces a healthy patient. Unusual conditions including types of skin cancer; will be used as a standard detachment indicating machine learning method known as neural networks. In addition, we will investigate the application of organizational rules on the problem of classification of x-ray films. Digital x-ray films are stored in large multimedia repositories for medical purposes. This multimedia database provides a great place to use image recognition methods to extract useful information and manage it on a specified website. These rules, which we would find using image recognition methods, will help physicians make important decisions for a particular patient's condition.

2. Paper Name: Fully Automated Method of Obtaining Skin Disease From Postero- Anterior Chest Radiographs.
Author's name: Paola Campadelli, Elena Casiraghi, and Diana Artioli
Abstract: —In the last few decades, much research work has been done on the development of systems that can improve the accuracy of radiologists in their diagnosis of skin lesions. Despite great efforts, the problem remains open. In this paper, we present an automated system for processing digital postero-anterior (PA) chestradio graphs, which

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Smart Emotion Learner Using Viola Jones Algorithm

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ABSTRACT: Students interest and involvement during class lectures is necessary to track to know the grasping concepts and significantly improves academic performance of the students. Direct supervision of teachers and professors is the main reason behind student attentiveness in class. Still, there is sufficient percentage of students who are even under direct supervision tend to lose concentration. By using the e-learning environment, this problem is solved due to absence of any human supervision. This calls for an approach to measure and identify appends of attention by a student in the learning session. This study is carried out to improve student's involvement in learning platforms by using their facial feature to extract mood patterns. Analyzing the moods based on emotional states of a student during an online lecture can provide interesting results which can be used to improve the efficiency of concept understanding in lectures

KEYWORDS: INTERNET OF THING (IOT), Smart Cities , human disabilities

I. INTRODUCTION

Classroom teaching assessments are designed to give a useful feedback on the teaching-learning process as it is happening. The best classroom evaluations additionally serve as significant sources of data for instructors, helping them recognize what they taught well and what they have to deal with. In the paper, we propose a deep learning method for emotion analysis. This work focuses on students of a classroom and thus, understand their facial emotions. Methodology includes the preprocessing phase in which face detection is performed, LBP encoding and mapping LBPs are done using deep convolutional neural networks and finally emotion prediction.

II. LITERATURE SURVEY

There are many online home service systems in existence which are discussed briefly in this This application will help a lot of teachers to know the level of understanding of students in schools, colleges or universities. Given the importance of the application in this information age, a lot of researches has been carried out to improve and help the needy students. This section will present past, present and prospective studies undertaken for the purpose of improving the learning approaches. Teaching and learning methodologies have transcended to new levels after the boom of information technology. As a result, the quality of education and number of learners has increased substantially. Still, the modernized way of learning creates problem that affects a students learning due to unavailability of any direct supervision.

An teachers can provide some interest into students understanding during lectures, therefore students involvement in class has direct correlation with the professional aptitude of the teachers. Direct supervision not only facilitates learning but also keeps the student synchronized with the course objectives due to instant communication with the teacher at any time during the lecture. Lack of communication has shown that affected students may experience high levels of frustration. As supervised teaching is very critical to the learning of the students, it presents a different set of challenges to teachers and students. Students visits a physical campus location and may have difficulty in establishing relationships with faculty and fellow students. Researchers who study

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A Framework for Analyzing Real-Time Tweets to Detect Terrorist Activities

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ABSTRACT: Social media are interactive computer mediated technology that facilitates the sharing of information via virtual communities and networks. And Twitter is one of the most popular social media for social interaction and microblogging. This paper introduces an improved system model to analyze twitter data and detect terrorist attack event. In this model, a ternary search is used to find the weights of predefined keywords and the Aho-Corasick algorithm is applied to perform pattern matching and assign the weight which is the main contribution of this paper. Weights are categorized into three categories: Terror attack, Severe Terror Attack and Normal Data and the weights are used as attributes for classification. K-Nearest Neighbor (KNN) and Support Vector Machine (SVM) are two machine learning algorithms used to predict whether a terror attack happened or not. We compare the accuracy with our actual data by using confusion matrix and measure whether our result is right or wrong and the achieved result shows that the proposed model performs better..

KEYWORDS: K-Nearest Neighbor (KNN) and Support Vector Machine (SVM)

I. INTRODUCTION

Detecting and removing terrorist related content on the Internet is an important and difficult task for law enforcement agencies all over the world. Jihadist groups, and specifically ISIS, have been able to maintain a persistent online presence by sharing content through a broad network of "mediamujahideen". The internet has been identified by senior Sunni extremists as a "battlefield for jihad, a place for missionary work, a field of confronting the enemies of God". This was further encouraged by a "Twitter Guide" (dalil Twitter) posted on the Shumukh al-Islam forum which outlined reasons for using Twitter as an important arena of the electronic front (ribat). Since 2011 the Syrian conflict, recognized as the most "socially mediated" in history, has developed into the new focal point for jihadi media culture

II. LITERATURE SURVEY

Paper Title	Author	Methodology
Tweeting for the caliphate: Twitter as the new frontier for jihadist propaganda.	A. Fisher and N. Prucha	Comparision of different machine algorithms
The call-up: The roots of a resilient and persistent jihadist presence on twitte	M. Lynch, F. Deen, and S. Aday,	SVM and Random forest algorithm
"Online territories of terror: how jihadist movements project influence on the internet and why it matters offline,	A. Zelin	Tweets are detected using LSTM

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EFFICIENT SOFTWARE DEFECTS PREDICATION USING SVM

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ABSTRACT

Many Organization wants to detect the number of faults in software system before they are placed, to scale the likely delivered quality and maintenance efforts. This helps many software and qualitative models have been introduced with a correspondingly great literature. We give a serious review of this literature. The bulk of broad range of forecast models use size and complexity metrics to detect defect. Other software's are depend on testing data, the "grade" of the development process, or take a multiple viewpoint(approach). Software defect prediction gives development groups with noticeable results, while giving to industrial outcomes and development defects detecting faulty code section can also help developers to recognize bugs and maintain their test activities different methods are used to identify or detect the classification part, the most known Machine Learning Algorithms like Support Vector Machine(SVM), Decision Tree(DT), Logistic Regression(LR). A organized research analysis is managed in framework of confusion, precision, recall, reorganization, accuracy, etc. The systematic analysis shows that the purpose outcome will give more useful solution for software defect prediction.

Keywords: *Defect Prediction Software; Metric Software's; Machine Learning; Complexity Metrics; SVM; DT; LR*

1. INTRODUCTION

In the Past few years, people have constantly focus on software quality software base system in which software quality is consider as a most critical element in user capability. The main goal of software defect prediction is to detect the fault in software hence to minimize the efforts and time taken as well as cost and grade of software the machine learning algorithm is used for the training and testing this purpose Support Vector Machine (SVM) algorithm. The characteristic of classification known as the relationship between attributes and training dataset is generated on the classifier method and inspect through the classification of the targets defining software faults, finding the faults and recognizing it is a constant work for researchers because of huge distribution of software.

The main goal of classifying the software data set as a model for error prediction into a defective and non-defective data set. The input software data set is given to categorizer in consonance with this method where the user knows the real class values. Requirement base and design based metric methods illustrate significant results before this scheme but the structure of algorithms and correctness of predictions remain a difficult task.

2. RELATED WORK

Machine learning may be a powerful methodology for prediction, software system defect prediction model projected by Wang et al. for increasing the amount of application software systems. Databases of defective software system comprise of unbalanced information that produces random patterns. This problem encouruges the creation of a good and reliable classifier of things for educational and industrial applications. Xu et al. researched "software defect prediction ways and hypothesized that ancient techniques use vectorization and have selection" framework to minimize trivial options, however still exclude alternative essential features leading to degraded performance of defect prediction strategy. "utilized a well known methodology in machine learning, i.e. SVM (support vector machine). Besides, predictability in attributes is mentioned through the diligence of a domestically linear embedding strategy with a support vector classifier. SVM constraints square measure so designed with a tenfold cross-validation method and grid search theme according to this approach".

"Support Vector Machine" (SVM) may be a supervised ML Algorithm that are often used for each classification or regression challenges. However, it's principally utilized in classification issues. within the SVM rule, we tend to plot every information item as some extent in n-dimensional house (where n may be a variety of options you have) with the worth of every feature being the worth of a selected coordinate.

3. LITERATURE SURVEY

Previous research approaches on software defect prediction has taken the researchers to one of these two decisions: one is creating new features or using combinations of existing features for better accuracy. Scientists and researchers have designed hand-crafted metrices to detect defect characteristic for example, Halstead features based on operator and operand counts, McCabe features based on dependencies, and other comprehensive

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CREDIT CARD FRAUD DETECTION USING MACHINE LEARNING

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ABSTRACT

With rapid advancement in the E-commerce field, fraud is spreading all over the world, causing major financial losses. In current scenario, Major cause of financial losses is credit card fraud. Credit card frauds are easy and friendly targets. E-commerce and many other online sites have increased the online payment modes, increasing the risk for online frauds. In recent years, For banks has become very difficult for detecting the fraud in credit card system. Machine Learning(ML) plays a important key role for detecting the credit card fraud in the transactions. The main address of the research is to design and develop a fraud detection method for Streaming Transaction Data, with an objective, to analyse the past transaction details of the customers and extract the behavioural patterns. the proposed system is implemented with Support vector machine (SVM) classification to detect the frauds. The conclusion of our study explains the best classifier by training and testing using supervised techniques that provides better solution.

Keywords: Credit Card, Machine Learning, Supervised Technique, Support Vector Machine.

I. INTRODUCTION

In today's world the credit card fraud is the biggest issue and now there is need to fight against the credit card fraud. "credit card fraud is the process of cleaning dirty money, there by making the source of funds no longer identifiable." The purpose may be to obtain goodies without paying, or to obtain unauthorized funds from an account or to avail some kind of services. Credit card fraud is also an add on to identity theft. On daily basis, the financial transactions are made on huge amount in global market and hence detecting credit card fraud activity is challenging task. The promising way to detect the fraud is to analyze the spending behavior of the cardholder. Every day, new and new researches are performed by the researchers in the different fields. Many researchers of finance field considered this problem as a challenging and important problem. The use of machine learning is proposed by the researchers to deal with this problem. Detecting the fraud means identifying the suspicious one, If any abnormality arises in the spending behavior then it is considered as suspicious. This research is to propose a credit card fraud detection system using supervised learning algorithm. supervised algorithms are evolutionary algorithms which aim at obtaining better solutions as time progresses. To Overcomes issues of we propose Machine learning method using 'Structural Similarity', to identify common attributes and behavior with other bank account transaction. Detection of credit card fraud transaction from large volume dataset is difficult, so we propose case reduction methods to reduces the input dataset and then find pair of transaction with other bank account with common attributes and behavior. To elude computational complexity & to provide better accuracy in fraud detection in proposed work. Support vector machine(SVM) is a method used in pattern recognition & classification. It is a classifier to predict or to classify patterns into two categories which may be fraudulent or non fraudulent.

II. METHODOLOGY

Support Vector Machine:-

Support Vector Machine (SVM) is a supervised machine- learning algorithm, which can be, used for both classification and regression challenges However, it is mostly used in classification problems. In this algorithm SVM is a binary classification hence the transactions are labelled either as fraudulent, or legitimate. This helps us to identify abnormal behaviour of user i.e. Fraud User. It uses following techniq

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Home Security System using Arduino Uno

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Abstract: ***This Project is based on implemented of an IOT based home security system, to be able to secure homes from anywhere in the world. The Major aim of this Project is it should be cost efficient and at the same time it should be secure, and this was achieved with the use of internet of things and some other electronics component. With the help of a mobile app and a keypad a working automatic door system was achieved.. IoT refers to the infrastructure of connected physical devices which is growing at a rapid rate as a huge number of devices and object are getting associated with the internet. Home Security has become a very important and useful application of IoT and we are using it to build an economical security system for homes as well as industrial use***
Keywords: Arduino, ESP32 CAM

I. INTRODUCTION

The MQ-2 sensor which is also known as the gas sensor which is used to detect if there is a gas leak will be placed inside the home mostly in the kitchen area so if there is a gas leak or a fire it will sense it send a signal to the arduino and the buzzer will go off alerting people about it.

The LDR will be cleverly placed behind the door. A laser light will be used to put light on the LDR. As long as the light from the laser is focused on the LDR it will be neutral and will make no changes or sound no alarm but, as soon as the light from the laser towards the LDR is cut by a person or blocked even by an object the LDR will send signal to the Arduino and the buzzer will go off. And the people around will be alerted that there is an intrusion or an unauthorized access to the premises.

The Esp32 cam will be placed in front of the door.

And this will work with the help of the LDR. When there is an intrusion detected the LDR will send signal to the buzzer as well as the camera. The camera after the signal is received will turn on and capture a video of 30 seconds of the front door. This will help in capturing the intruder's face, which can be used later on if a case needs to be filed in case of robbery.

II. ARDUINO

Arduino Uno is a microcontroller board based on the ATmega328P. There are 14 digital input/output pins from which 6 of those can be used as PWM outputs, a 16 MHz quartz crystal, 6 analog inputs, an ICSP header and a reset button, a USB connection and a power jack, It has everything that is needed to support the microcontroller; you can simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or even use a battery to get started.. You can interfere with your UNO without worrying too much about doing something wrong, worst case scenario you can replace the chip for very less price and start all over again.

Figure 1: Arduino UNO

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Foresees The Next Step of Equity Market

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Abstract- *Predicting stock market movements is a well-known problem with interest. The social media of today is well-represented by the public's feelings and opinions about current events. In particular, Twitter has attracted a lot of attention from researchers by studying public sentiments. Stock market predictions on the basis of public sentiment expressed on Twitter have been the subject of interesting research. The way to analyze emotions is to see that changes in stock prices i.e. how the ups and downs are related to the public opinion expressed by them on Twitter.*

Keywords- Twitter, ARIMA, Stock Market, Sentimental Analyze, Short-term prediction.

I. INTRODUCTION

In this web application we can predict our next move of equity market whether to buy the stock or sell through sentimental analysis and technical analysis or ARIMA algorithm. Sentimental analysis helps in analyzing the general public sentiments on Twitter, this approach is our approach through exploitation create of sentimental analysis. Another approach within the same topic of our project is exploitation technical analysis. After a successful login we have to enter dates from the range of week, month, year predict stock market feature will give you the performance of the stock, current price and in the predict sentiment feature you will get know to know the thoughts of market expertise in positive trend or in negative trend from their latest tweets. We model the stock worth movement as a operate of those input options and solve it as a regression drawback in an exceedingly multiple kernel learning regression framework. We conjointly evaluated the model for taking buy-sell call at the tip of day that is additionally called intraday commercialism.

II. RESEARCH AND IDENTIFY ABOUT PROJECT CONCEPT

1. ARIMA MODEL

Auto Regressive Integrated Moving Average (ARIMA) is a model that describes the time series provided based on the visual value that can be used to predict future values. Using ARIMA models in Anytime series shows patterns that do not have random white noise and are not seasonal. Model introduced by Box and Jenkins in 1970. In order to generate short-term forecasts, ARIMA models have demonstrated the effective power of complex structural models. The future value of the variance in the ARIMA model is a combination of line to past values and errors, expressed as follows:

$$Yt = \phi 0 + \phi 1Yt - 1 + \phi 2Yt - 2 + \ldots + \phi pYt - p + \varepsilon t - \theta 1\varepsilon t - 2 - \ldots - \theta q\varepsilon t - q \quad (1)$$

There,

Yt is a real value and Et is a random error in t, futhii and coefficient, and are whole numbers often called autoregressive and move average, respectively. j p q

2. MARKET TREND

Time series data may have a trend for them whether it is an upward, vertical trend or a downward trend. This defines the average of what is done in this series of time in a large period of time what the average does whether it goes up horizontally or vertically or downwards.

III. FINDINGS AND METHODOLOGIES

A. Methodologies

Predicting the long term stock with the ARIMA model will be by evaluating ARIMA car prices in the same way as customizing ARIMA models (p, D, q) to attract a higher speculative model. The ARIMA model is used for real Netflix stock information publicly available on Yahoo! Finance. The database contains Netflix daily stock information for 5 years, from 7 Apr 2015 to 7 Apr 2020. The forecast method adjusted only the closing closing times, as it represents the significant daily closing amount in the same way as this price is estimated. for more accurate reading. The model used the R-language of torture in R Studio. verify the accuracy of the model and comparisons between multiple tests within the model may be based on calculating Autocorrelation Functions (ACFs), Perfect Partial Autocorrelation performance (PACF) as well as Mean Absolute proportion Error (MAPE)

B. Non-seasonal ARIM

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Water Requirement Forecasting for City System Using Machine Learning

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Abstract: Water is essential to the existence of life on Earth. The causes of dehydration are natural and anthropogenic. In the world, the amount of freshwater remains constant for a period of time, but the population has already reached it. So aim for freshwater that is stronger day by day. Proper management and prognosis is required for effective and efficient water use systems. Water demand and forecasting are the mainstays of urban water management. Machine learning is one of the most well-known methods of prediction. Machine learning is a data analysis method that gives a machine the ability to read without being completely organized. Unlike traditional methods of predicting required that were incorrectly structured and poorly structured historical data, machine learning looks or has the power to analyze that data This technique predicts the annual water demand for the succeeding year employing a statistical algorithmic program and water demand for industries, agriculture, domestic and public gardens. This multi-method prediction suggests potential for extension to advanced probabilistic prediction issues in alternative fields.

Keywords - water supply, supervised learning, linear regression, SVM algorithm, water demand

I. INTRODUCTION

Water is needed to satisfy the basic human needs such as hygiene, drinking, cooking, farming and recreation. A water supply forecast is a prediction of stream flow volume that flows past as a point on a stream during a specified reason, typically in the spring and summer. Economic viability and social development are largely dependent on the balance of water resources, as in the last few decades desalination has become an important means of water supply, opening the door to tackling conflicting water resources that have the potential to provide sustainable water supply. Desalination provides about 1% of the world's drinking water, but this number is rising year by year. The overall concept we use contains several main elements: supervised statistical learning for extracting dominant features from high-dimensional input data, a multi-method core drawing on statistical and machine learning techniques for relating the extracted features to the predict and, and evolutionary methods for automated generation of optimal model suites, that is, input data and feature selections on a per-model basis. This overall system design directly reacts the way that the water resource science and engineering community frames and structures statistical. . Water demand forecasts permit the Water Distribution Network to scale back energy consumption by three.1% and scale back energy prices by five.2%. Water demand statement is conducted for varied horizons. short statement aims at anticipating water demand over the approaching hours, days, or weeks, therefore on optimise the operation of water systems (reservoirs, chemical change plants) whereas factorization in changes in weather and shopper behaviours. In long design, several factors of amendment are vulnerable to modify each the client base and per unit water consumption. Uncertainty could be a key issue in long water demand statements. For this study secondary data has been collected. From the website of KSE the monthly stock prices for the sample firms are obtained from Jan 2010 to Dec 2014. And from the website of SBP the data for the macroeconomic variables are collected for the period of five years. The time series monthly data is collected on stock prices for sample firms and relative macroeconomic variables for the period of 5 years. The data collection period is ranging from January 2010 to Dec 2014. Monthly prices of KSE -100 Index is taken from yahoo finance.

II. LITERATURE SURVEY

[1] Models For forecasting water demand using [illegible] analysis: a case study in southern Brazil, By Danielle C. M. Ristow Which determines monthly urban water consumption in the short term. The objective of this study involves using low computational cost procedures to evaluate modelling techniques to choose more efficient model for the analysed data set. The data used in this research study refer to the micro-metered monthly water consumption per water-consuming unit, in the urban environment of the city of Joinville, from January 2013 to December 2017. The municipal water supply company provided the data sorted into four

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Predicting the Probability of Bank Deposit Subscription

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Abstract: ***Recently, economic depression, which scoured all over the world, affects business organizations and banking sectors. Such an economic pose causes severe attrition for banks and customer retention becomes impossible. Accordingly, marketing managers are in need to increase marketing campaigns, whereas organizations evade both expenses and business expansion. To solve such a riddle, data mining techniques are used as an uttermost factor in data analysis, data summarizations, hidden pattern discovery, and data interpretation. In this paper, rough set theory and decision tree mining techniques have been implemented, using real marketing data obtained from a Portuguese marketing campaign related to bank deposit subscriptions.***

I. INTRODUCTION

Business intelligence is a recent term that concerns using the information space and intelligent mechanisms to support business managers' decisions. Since business organizations including banking sectors yield tones of records and transactions every day, the most suitable intelligent mechanisms that can handle such vast growth of data set and information is data mining techniques.
Data mining is known as the process of monitoring new and innovative information from the vast amount of data sets by discovering hidden and unknown relationships between features that are entailed in the data records, spotting the interesting events and buried patterns, summarizing the information space to extract predictive decision rules, discriminating the information space into sets of objects and minimizing the features the describes the information space. Accordingly, DM can be used to aid decision-makers in the banking sector to confront the economical pretence by avoiding risky transactions that cause bank attrition and increasing the customer retention incentives to raise the bank revenues.

II. DATA SET TERMINOLOGY

In this research, we use a real dataset that was collected from a Portuguese bank that used its contact centre to do direct marketing campaigns to motivate and attract deposit clients. The dataset is related to 17 marketing campaigns and corresponds to 79354 contacts. The telephone and the internet were the central marketing channel, in which, an attractive long-term deposit application, with good interest rates, was offered.

There are two datasets:

1) Bank-full.csv that contains various examples corresponding to 45211 objects and ordered by date.
2) Bank.csv that holds 10% of the examples (4521 records), randomly selected from bank-full.csv.

However, it contains almost all possible varieties for the attributes' values and object instances. The bank.csv data set was firstly used in the implementation phase as a test database; however, it has been implemented in the form of a relational database as seen below in the database implementation subsection.

III. DATA SET DESCRIPTION

The dataset consists of one table with 16 non-empty conditional attributes and one decision attribute, where:

1) Age: the age of the customer
2) Job: type of job (categorical)
3) marital: marital status (categorical)
4) education: the education level (categorical)
5) Default: has credit in default?
6) Balance: average yearly balance
7) Housing: has a housing loan?
8) Loan: has a personal loan?
9) Contact: last contact of the current campaign (categorical)

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Review on Detection of Objects In Drone Images

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Abstract- *With the advent of drones, new potential applications have emerged for the unconstrained analysis of images and videos from aerial view cameras. Despite the tremendous success of the generic object detection methods developed using ground-based photos, a considerable performance drop is observed when these same methods are directly applied to images captured by Unmanned Aerial Vehicles (UAVs).Armies are using drone aggressively, and they constantly need a person to keep attention if there is a movement in the frames.Directly benefiting from the deep learning methods, object detection has witnessed a great performance boost in recent years.One of the typical solutions is to use Convolutional Neural Networks (CNNs) to train detection model by taking single frame as input.*

Keywords- Deep learning, computer vision, object detection, drone, sample imbalance, super-resolve GAN.

I. INTRODUCTION

Object detection has been widely studied for decades. The most famous detectors, such as those used for surveillance, mainly focus on the object of interest in images captured by ground-based cameras. However, with the advantages of low cost, high flexibility, simple operation, and a small size, camera-equipped drones have been rapidly developed and deployed to replace satellites and cameras for a wide range of applications, such as in agriculture, aerial photography, delivery, surveillance, as well as in other fields . Object detection is therefore one of the key technologies that will improve the perception capability of drones, and in addition, it is the basis for other intelligent algorithms, such as segmentation , object tracking , crowd estimation, etc. Despite the high demand for this technology, the drone-based detection algorithm still poses more challenges than the traditional ground-based detection algorithm. Progress has been slow in the research on object detection for drones, and this has gradually become one of the bottlenecks restricting the development of drones. The level of accuracy and real-time object detection will determine whether the drones' mission will end with the destruction of the aircraft or its safekeeping. Limited by electric power, range, and environment, the drone-based object detection algorithm brings certain challenges:

The instability of fast-moving UAVs means that aerial images are often blurred and noisy. In addition, less feature information is extract-able from these moving targets, the drone may repeatedly detect the same object, and it may falsely detect a target;

- The objects in need of detection are generally small in the images. This means that when the UAV takes photos from high up, small targets are easily missed.
- The UAV's continuous movement and the changes in the external environment (such as light, clouds, fog, rain, etc.) lead to drastic changes in the target's features within the image, and thus increase the difficulty of subsequent feature extraction.
- The drone-based object detection algorithm needs to quickly and accurately detect moving targets , so the algorithm must meet real-time computing requirements.

Since the target usually appears small in drone images, the object's features are often unclear and can easily be confused with the features of other objects. In addition, having excessive background in the image can lead to having too many negative samples in the training process, which affects detection accuracy. Motivated by these observations, this paper aims to improve the efficiency and accuracy of a drone object detection system based on the challenges mentioned above. We offer to study an object detection model based on the idea of an anchor-free framework that can reduce the amount of computation of IoU (Intersection over Union). In order to adapt the positive and negative samples, we propose new sample selection strategies. In addition, the weight-Generative Adversarial Network (GAN) sub-network is proposed to enhance the features locally. Following this, experiments carried out on VisDrone datasets are used to demonstrate our method's advantage over state–of–the–art detection method

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REVIEW ON PARKINSON'S DISEASE DETECTION USING MACHINE LEARNING

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Abstract *– Parkinson's disease is a condition in which dopamine-producing cells in the brain die. Parkinson's disease symptoms appear as the amount of dopamine in the brain diminishes. Parkinson's disease is a slow-progressing condition with symptoms such as tremors in the hands, arms, legs, chin, and face that get worse with time. People may have trouble walking and speaking as the condition advances. Although there is no cure for Parkinson's disease, the symptoms of the disease can be alleviated with the use of some medications. There are a number of common symptoms that may or may not suggest that the patient has Parkinson's disease. In this study, a new rating system was developed to aid in determining the severity of Parkinson's disease. However, a person with identical symptoms does not necessarily have Parkinson's disease. Because Parkinson's disease is an unsolved problem, the study focuses On relevant aspects, medicines, and common approaches used to identify or assess the disease. Patients with Parkinson's disease often experience voice difficulties in the early stages of the condition. As a result, recent investigations for the identification of Parkinson's disease have focused on diagnosis systems based on voice disturbances.*

KEYWORDS: PD (Parkinson Disease), dopamine, Ensemble Learning, Boosting.

INTRODUCTION

How does machine learning function, and what does it entail? Machine learning (ML) is an artificial intelligence (AI) technique that enables software to improve prediction accuracy without being particularly designed to do so. Machine learning algorithms use historical data as input to forecast newly introduced output values. Parkinson's disease (PD) can be difficult to diagnose, especially in its early stages, because the symptoms of other neurologic conditions might be confusing. Motor signs such as bradykinesia (slowed movement and loss of spontaneous movement), muscle rigidity, a resting tremor, and postural instability are used to make the current diagnosis (balance issues).After Alzheimer's disease, Parkinson's disease (PD) is the second most common neurological disease .In general, there are two types of PD symptoms: motor and non-motor symptoms. Tremor, bradykinesia, stiffness (rigidity), and impaired balance are the main motor symptoms of Parkinson's disease (postural instability). Mood problems, cognitive dysfunction, pain, sensory dysfunction, and dysautonomia are the most common non-motor symptoms .Patients with Parkinson's disease frequently experience motor speech problems. More than half of the patients have speech problems, such as very quiet and rushed speaking .Speech signal analysis is a popular non-invasive way for diagnosing Parkinson's disease. Clinicians and neuroscientists are interested in noninvasive PD detection and prediction technology. Furthermore, detecting speech changes in Parkinson's patients would allow for early detection and intervention before the onset of disabling physical symptoms, which would have a significant impact on both patient healthcare system and patient life span as well as quality of life.

LITERATURE SURVEY

[1] In this paper, authors have introduced a system which is useful for detection of Parkinson's disease. Parkinson's disease is a central nervous system condition that affects the body's motor processes. It's a long-term illness with symptoms that worsen over time. It usually affects the elderly, whose symptoms steadily worsen until they reach a peak. Hearing, walking, speech, and other basic bodily functions can all be affected by the condition. Generic machine learning methods that provide varied degrees of accuracy can be used to analyse this disease. As a result, the best one is picked, as it will provide the maximum level of accuracy in predicting whether or not the disease is present in the patient.

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Water Requirement Forecasting for City System Using Machine Learning

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Abstract: Water is crucial to the existence of life on Earth. The causes of dehydration are natural and phylogenesis. Within the world, the number of fresh remains constant for an amount of your time, however the population has already reached it. Therefore, aim for something fresh that's stronger day by day. correct management and prognosis is needed for effective and economical water use systems. Water demand and statement at the mainstays of urban water management. Machine learning is one among the foremost well-known strategies of prediction. Machine learning could be an information analysis methodology that provides a machine the flexibility to browse while not being fully organized. In contrast to ancient strategies of predicting needs that were incorrectly structured and poorly structured historical information, machine learning appears or has the ability to investigate that information. This technique predicts the annual water demand for the succeeding year employing a statistical algorithmic program and water demand for industries, agriculture, domestic and public gardens. This multi-method prediction suggests potential for extension to advanced probabilistic prediction issues in alternative fields.

Keywords: water demand, statement, multivariate analysis, trade applications, environmental management, machine learning.

I. INTRODUCTION

Water could be a basic supply of life and a vital supply of financial gain for the economy. Water covers regarding seventieth of the world, and it's simply assumed that it'll continuously be there for United States of America, however, water deficiency has affected several areas on completely different continents, per a recent UN agency study by 2025, 1.8 billion individuals living in several areas can face severe shortages of water, and regarding thirty third of the world's population is also subject to water stress. Economic viability and social development ar mostly keen about the balance of water resources, as within the previous couple of decades chemical change has become a vital means that of installation, gap the door to grappling conflicting Date 2021-06-26 Words 627 Characters 4529 Page 1 water resources that have the potential to produce property installation. chemical change provides 1 Chronicles of the world's water, however this range is rising year by year. As it needs important energy use, pumping H2O is dearer than alternative natural resources like groundwater or rivers, on the opposite hand water use and conservation value $ one.09 to $ 2.49 per thousand liters [4], water demand Predict to scale back intake , and therefore the value of treatment, storage and distribution. Water demand forecasts permit the Water Distribution Network to scale back energy consumption by three.1% and scale back energy prices by five.2%. Water demand statement is conducted for varied horizons. short statement aims at anticipating water demand over the approaching hours, days, or weeks, therefore on optimise the operation of water systems (reservoirs, chemical change plants) whereas factorization in changes in weather and shopper behaviors. A short demand statement will facilitate estimated revenues from water sales and arrange short- term expenditures. Intermediate-term statement (1–10 years) focuses on the variability of water consumption by a hard and fast or slowly increasing client base. It considers changes driven by weather cycles, changes within the composition or characteristics of the client base, or economic cycles. A long statement, the main target of this chapter, considers horizons of 20–30 years. This is often the timeframe taken under consideration once building long-lifespan installation infrastructures like chemical change plants, storages, or large- capacity inter-basin transfers. In long design, several factors of amendment are vulnerable to modify each the client base and per unit water consumption. Uncertainty could be a key issue in long water demand statements.

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Project Tourist Translator Using

Hybrid Translation

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Abstract: ***When it comes to learning the local language as a visitor in a foreign country, it's not easy. Everything requires an understanding of the local language, from reading signs to being overcharged while buying, booking cabs and hotels for their stay, sightseeing, and communicating with the locals. Nowadays, almost everyone owns a smartphone, which has proven to be the most useful instrument for travelling. We want to create an Android application that can translate text, speech, and textual information written on signboards from one language to another. For signboard translation, users will need to use their smartphone camera. For language translation, we are using a hybrid machine translation approach. Recognition of text from images is done using digital image processing. The goal of this project is to minimize the likelihood of any single component failing. To reduce miscommunication between tourists and locals, a machine translation approach is being used.***

Index Terms - **Tesseract OCR, Image Translation, Hybrid Translation.**

1. Introduction

In this world, 1.35 billion out of 7.8 billion people speak English which is almost less than one-fourth of the population. Due to this reason, tourists find it difficult to communicate with locals, and traveling in areas where English is not spoken might make one feel as if they are trapped inside a mysterious bubble. It becomes harmful if one is not able to read the signboard of the speed limit or no parking, it can cause chaos, thus it becomes a necessity to read the signboard. Because of their incapability to communicate, they are cut off from the rest of the world. To avoid this issue, the software is developed where we can convert text, speech, and signboards to the desired languages using the Yandex Application programming interface.

2. System Flow

In this paper, we propose the following stages for text detection, recognition, and translation algorithms.

2.1 Digital Image Processing

2.1.1 Capturing Image

Tourists can use the camera capture module to capture a single textual picture from a signboard or a natural sight by adjusting the camera capture box on the screen by touching the edges of the capture box. The camera is set to autofocus mode for the duration of the session. After capturing the desired image, the image is given to the Tesseract OCR engine module.

2.1.2 Tesseract OCR Module

This section completes the binarization technique for the taken image, which is then evaluated after the text form. Various phases receive the term or string. In these phases, each letter or character is retrieved from the string, and the requirement to attach the extracted character or disrupt associated characters is assessed. Finally, extracted characters are identified using embedded fuzzy features and training data for a given Unicode character language. After that, each character is combined to form a word in the same order as it was extracted, and the word is compared to the terms in the language dictionary.

2.1.3 Word Matching in the dictionary

Each group of a word sequence is transmitted to the Yandex Server's Dictionary software, which will aid in more exact and accurate recognition of the phrase than just presenting the result of meaningless word. The identified text will now be passed to the Unicode text post-processing module.

2.1.4 Unicode text Processing

After the recognized text is supplied to this module, Unicode characters will be shown, and the user will have the option to convert the identified text into a certain known language by selecting from the drop-down list under the options.

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Skin Cancer Detection Using Deep Learning

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ABSTRACT: Melanoma is the most common of all skin cancers and its incidence has reached epidemic proportions. It is important to distinguish between benign and malignant melanoma as soon as possible to increase the chance of recovery. Advances in computer technology, especially machine learning and computer vision, make it possible to classify diseases based on their image. Diagnosis by imaging is advantageous because it can be performed easier, cheaper, faster, and without attack than with a biopsy. The use of a standard reading machine and a computer-assisted visual approach makes its phase-functioning more sensitive to the result of the separation of the skin lesion and the features selected for the separation process. The latest developments of an in-depth learning algorithm, such as CNN (Convolutional Neural Network), make it possible to classify images without going through the process of image classification and manual features and provide high performance with sufficient training data. Therefore, in this study we propose a convolutional neural network (CNN) to classify melanoma images into a dangerous and dangerous category. The proposed network architecture consists of several sets of convolutional layers and layers of mass integration, followed by an exit layer and a fully integrated layer. From the test results in 352 test images, the proposed network provides 84.76% accuracy, sensitivity, and clarity, and 78.71%. The efficiency of a hopefully built model can be improved for the actual use of that I can help a specialist diagnose and treat better.

I.INTRODUCTION

Melanoma is a very serious skin cancer [1] and is now the most common type of cancer in white people. Its incidence has reached epidemic proportions [2]. Melanoma can be treated surgically if it is detected early (metastasis) in other organs [3]. However, in severe cases when malignant melanoma has spread to other organs, it is difficult to treat and therefore a higher mortality rate [4]. It is important to distinguish between benign and malignant melanoma as soon as possible to increase the chance of recovery. A biopsy of a doctor or dermatologist is usually needed to differentiate between malignant and malignant melanoma. However, advances in computational technology, especially machine learning and computer vision, make it easier to distinguish diseases based on their image. Diagnosis by imaging is advantageous because it can be performed easier, cheaper, faster, and without attack than with a biopsy. Brinker, et al. (2019) compared performance between dermatologists with varying degrees of experience with a computer program that uses the Convolutional Neural Network (CNN) algorithm to make melanoma image classification more dangerous and risky.

II. METHODOLOGY

An image set of melanoma image was obtained from the ISICA archive [9]. The train set contains 1,440 images of benign melanoma and 1,197 photographs of malignant melanoma. The test set contains 360 images of benign melanoma and 300 images of malignant.

Fig.1.Examples of benig nmelanoma

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TRAFFIC PREDICTION USING DEEP LEARNING AND AI

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ABSTRACT

Our research "Traffic Prediction using Deep Learning and AI" is a Traffic forecast assumes a fundamental part in clever transportation framework. Precise traffic forecast can help course planing, guide vehicle dispatching, and moderate gridlock. This issue is trying because of the convoluted and dynamic spatio-worldly conditions between various locales in the street organization. As of late, a lot of exploration endeavors have been committed to this area, particularly profound learning strategy, significantly propelling traffic forecast capacities. The reason for this paper is to give a thorough review on profound gaining based approaches in rush hour gridlock expectation according to numerous viewpoints. In particular, we initially sum up the current traffic forecast techniques, and give a scientific classification. Second, we list the best in class approaches in various rush hour gridlock forecast applications. Third, we thoroughly gather and coordinate broadly utilized public datasets in the current writing to work with different analysts. Besides, we give an assessment and investigation by leading broad examinations to look at the presentation of various techniques on a genuine public dataset. at long last, we talk about open difficulties in this field.

Keywords: Traffic, Prediction, Deep, Learning, AI, difficulties, Current Traffic Forecast Techniques.

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1. INTRODUCTION

THE cutting edge city is slowly forming into a savvy city. The speed increase of urbanization and the quick development of metropolitan populace carry extraordinary strain to metropolitan traffic the board. Wise Transportation System (ITS) is a crucial piece of savvy city, and traffic forecast is a significant part of ITS. Exact traffic expectation is vital for some genuine applications. For instance, traffic f low expectation can assist city with lightening clog; vehicle hailing request forecast can provoke vehicle sharing organizations preallocate vehicles to appeal areas. The developing accessible traffic related datasets give us expected new points of view to investigate this issue.

Speed The real speed of vehicles is characterized as the distance it ventures per unit of time. More often than not, because of elements, for example, geological area, traffic conditions, driving time, climate and individual conditions of the driver, every vehicle on the street will have a speed that is to some degree unique in relation to those around it.

Demand The issue is the way to utilize verifiable mentioning information to foresee the quantity of solicitations for a district in a future time step, where the quantity of start/get or end/drop-off is utilized as a portrayal of the interest in a locale at a given time.

Predicting the Probability of Bank Deposit Subscription

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Abstract

As the number of marketing campaigns to which consumers are subjected continues to explode, for-profit businesses, non-profit charitable and community organizations, and political candidates are becoming increasingly dependent upon targeted direct-to-consumer (DTC) campaigns. For these campaigns to be successful, these organizations must invest heavily in strategies that select the best possible prospects. For this study, we examined 45,211 records related to direct marketing campaigns of a Portuguese banking institution and attempted to define a reliable model for predicting consumer intent to subscribe to a term deposit.

1. Introduction

1.1. Overview

As the major application right now of Machine Learning is in the field of banking and finance. So, along those lines, we choose our topic. We have a dataset using which we will predict the probability of one person subscribing to a term bank deposit. Term deposits are basically what the bank asks us to deposit a specific amount for a specific period of re-served time in the bank and the bank will provide a return on the amount. So, we decided to take this topic and study it to make a model that will tell the bank whom they can approach for a positive reply.

1.2. Motivation

The motivation is to create a machine learning algorithm that will solve a real-world problem by helping the bankers realize which customers may actually subscribe to the long-term subscription of the bank.

1.3. Problem Definition

Based on the dataset provided to us we have to use different machine learning algorithms and see which gives out the best result for predicting which people are most likely to subscribe to the term deposit plan of the bank.

1.4. Objectives

Create a Prediction Model of Bank Deposit Subscription using Machine Learning algorithms.

1.5. Project Scope

In our research, we found a handful of research papers and upon looking into them we saw that the models have low accuracy. So, we decided to take the dataset and use various algorithms on the dataset and make a model that is much better in the terms of accuracy and could increase productivity.

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Smart Blind Stick Using Arduino UNO

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Abstract- In the era of technology where each and every person strives to be independent in order to survive in this competitive world, being an independent is the at most priority to almost all the people. Our project is designed to provide this independence to the visually challenged people. This project gives them helping end to commute safely and securely. This act as a Third Eye for the visually challenged people and make their difficult life little bit simple and safe. The project consists of Ultrasonic sensor used for detection of obstacles like staircase, wall and other objects. After the detection of an obstacle, it alerts the user by beep sound of the buzzer.

Keywords- Stick, Arduino, Ultrasonic Sensor, Buzzer, Switch, Vibrator, Battery.

I. INTRODUCTION

Over 285 million people are visually impaired worldwide out of them 39 million people are being blind and 246 million have low vision. About 90% of world's visually impaired live in developing countries. The blind traveler should depend on any other guide like blind cane, peopleinformation, trained dogs etc.

The main aim of this initiative is to enable the blind navigate with confidence and to be alert if their walking route becomes obstructed with otherthings, people or related odds. Here Blind Stick with buzzer, vibrator Arduino UNO, and switch are utilized.

Arduino UNO is microcontroller which can do all the counts fatly and rapidly with the incredible precision. Ultrasonic sensor is utilized for recognizing obstruction. However, this system just gives an alert if sensor is triggered; it uses a buzzer to alert the blind person.

II. REVIEW OF LITERATURE

[1]Approach suggested for use of a blind smart stick without eyes: danger identification, artificial vision. The reference stick is used for the indoor and outdoor use of the blind person. [2]

The platform actually uses ultra-sonic sensors to detect obstacles. Once an obstacle is reached or we hit the speech circuit of destination should trigger supplying a sort of expression.Subsystems are connected to a microcontroller which executes the operations and schedules them. The machine is inexpensive. The accuracy is big study for the unsightly utilizes bursts echoes methodology. [3]

Blind people still keep alert at the buzzer duration and listen to noises. Thus, the software is affordable, quick to use and features are simple design capable of integrating new technologies.

III. OBJECTIVES

The main aim of this project is to detect nearby obstacle and notify the user of the direction of that obstacle, thereby enabling the user to determine the corrective direction ahead.

IV. PROPOSED WORK

The stick is embedded with Arduino, vibrator, switch and sensor. If sensor senses the obstacle, the vibrator which is placed over the handle vibrates. Ultrasonic sensor detects obstacle ahead using ultrasonic waves.

On sensing obstacles, the sensor passes this data to the microcontroller. Then microcontroller processes this data and calculates if the obstacle is close enough. If the obstacle is close then microcontroller sends the signal to a buzzer. Developing the product at minimal cost becomes the key agenda pf the project.

V. BLOCK DIAGRAM

Fig. 1. Block Diagram of Project.

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This is to certify that
Prof. Sushma Patwardhan
has published a paper entitled
"Smart Pesticide Spraying Robot"
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Agriculture Protection from Animals Using Smart Scarecrow System

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Abstract- Subsistence farmers of our country repeatedly encroaching wild habitats so interaction between farmer and wildlife increases resulting into the conflicts. We studied how the pattern of raiding changes according to different seasons, farm land and crop types. A smart scarecrow system is constructed to minimize crop raiding and man animal conflict from wild animals and birds. The scaring system works in three parts: time delay, servo control with flash light and automatic sound system. Depending upon seasonal cropping pattern sound of the system get automatically adjusted using mp3 module. In our study we take samples from different farms combined and observed how object detection vary at day and night in three seasons which gives monthly efficiency of the system. It is more convenient and cost effective than traditional scaring strategies like trapping, hunting and wood fencing. No manpower is required for scaring. The present system is made up of metal body so it can work in worst climate conditions.

Keywords – Servo Motor, Arduino Nano, DF Player Module, Speaker, Torch, Smart Scare Crow.

I.INTRODUCTION

One of the great dilemmas of our era is the increasing conflict between wildlife- farmers and crop raiding. It has been around since beginning of agriculture. Recently Tamil Nadu reported a total of 7,562 incidents of crop-raiding by wild animals in the last three years. There are many different situations and reasons where wildlife-farmer come into conflict. Some of the reasons for that is in search of water, livestock predation, increase in human populations, increase in agriculture and reduction in forest land, the availability of palatable and nutritious foods near farm edges.

For that farmer utilize strategies and traditional methods that are often cruel and ineffective. While arbitrary killing, trapping or poisoning of suspect may provide short-term satisfaction but it fails to address long-term needs. So, we must seek to understand sociological, economic and cultural aspects to find solution. Researchers suggest managing pastures to reduce competition for forage between wildlife and domestic livestock. In addition, shifting from farming system with perennial crop may reduce losses. But this cannot be the proper solution for the problem. In general, crop damage by monkey and wild-boar is more serious in northern part epically in lower altitude areas.

So, farmers usually adopt some crop protection strategies guarded their crop by spending night out in field, wood fencing whereas wealthier farmers used imported barbed wire, trapping, hunting are popular. Use of plastic flags, brightly coloured objects, scents and fireworks works sometimes but again that are marginally successful. Some make system consists of sound clips for different animals and red lamp connected to stick which is not durable. There are smartphone-controlled systems but here was no provision of movement. For birds unmanned aerial system (UAS) is used to deter birds. To detect birds, background subtraction algorithms have been used. For security and detection some use sensor cloud-based architecture implemented using IOT. Many systems developed which detects the intruders, monitors any malicious activity and then reports it to the owner of the system but these are unable to fear the wild animals and primates.

There is by no means an easy solution to this problem. Wild-animals now a days are smart enough they learn to overcome obstacles such as fences and scarecrow. So, there is need of automation system in agriculture field which can avoid man animal conflict and crop raiding. So, one of the technological solutions for this problem is smart scarecrow system which uses high intensity light, arm movement to fear the animal as well as birds. The common form of scarecrow is a humanoid structure dressed and placed in open field to discourage the birds and animals from disturbing and feeding on recently cast seeds and growing crops.

This system consist servo motors present here performs the motion operation of scarecrow arm and firecracker sound buzzer is used to deter animal as well as birds and for the night time high intensity lights placed on head is used to keep animals away from farm field. Advancement is needed to this system too.

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Moder AgricultureWith Auto Pet Fedder System

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Abstract- The idea for this generated from following

Choice of technology: - The project is based on Arduino uno and IoT technology. We have used automated cowshed and assistant for famers. We have been choosen this technology to make the work automated and easy for famers.

Eco friendly: - Customer and authorized person get the acknowledge through the sms on mobile thus use of paper is avoided so deforestation is avoided and also avoid the use to pen for entering the data so the use of plastic is also reduced which is hazardous to nature.

Best use available resources:- Due to use of Arduino uno and IoT it is fully automated. Automatic pet feeding system features machine which can feed pets automatically.

Social impact of project:- It is invented to give the farmer an assistant. As we know farmers and agriculture is India's biggest power. So it agriculture system will be improved. Our India in agriculture field also get improved. For this the automated and modern agriculture is very useful for our farmers. So they can get more time to make agriculture system well and good get more time to make agriculture system well an good. This will help to improve the Indian agriculture system, utilize the resources very greatly and it is step towards Digital India"

Functionality: - It is fully automated system works on Arduino and IoT .when process is started, food from motor is automatically down in front of animals. Water pumps are used to supply the water to the cowshed to clean the cowshed and other one is supplied to the farm. With the help of moisture sensor, water in the soil can be identified .temperature and humidity sensor senses the soil and all information regarding is notified to the farmer through IoT on the farmer's mobile. This makes all the work automated and easy.

User friendliness:-In the project messaging / notification system is used to get all information about farm in absence of farmer and also feed the animals or pet in absence of farmer and farm work easy.

Aesthetic & completeness of project:-This system is implemented to reduce the human work and modify the cowshed according to technology. Project is executed as per our aim and we have completed its presentation using project demo

Power requirement-Arduino-5v , Nodemcu-3.3v, 4channel relay-5v , power supply-230.

Keywords- Arduino and IoT ,

I.INTRODUCTION

Now-a-days most of the farmers are fascinates to have animals to their farm like cows, buffaloes, goats etc in their fan. The work is about the modem agriculture with auto pet feeder system. So that the farmers would get an assistant. It can save their time and work manage their a work through very efficient way.

In modern agriculture we have used sensors to sense the quality of soil. Modem agriculture is based on Arduino and IoT. Through this all the work are done automatically through Arduino and IoT. It is fully automated cowshed system works on Arduino and IoT. In this system, we have implemented automatic system such as automatic feeder for food of animals, temperature and humidity measurement present in the soil, water supply to farm and cowshed. This system is user friendly as any one can easily handle this system without any training.

II. PROBLEM STATEMENT

In the increasing agriculture activity in India ,there is no smart facility and assistant to make farmer and agriculture system developed .

III . OBJECTIVES

1. The objective of the [illegible] to create an automatic feeder system to feed [illegible] for farmers.
2. The project is de[illegible] keeping the view of dairy farm poultry farm and [illegible] system.

Prachi Admane, 2022, 10:3
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Library Management System Using RFID Technology

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Abstract-Radio frequency identification (RFID) is a rapidly emerging technology which allows productivity and convenience. Radio Frequency Identification (RFID) is a new generation of Auto Identification and Data collection technology which helps to automate business processes and allows identification of large number of tagged objects like books, using radio waves. This paper proposes RFID Based Library Management System that would allow fast transaction flow and will make it easy to handle the issue and return of books from the library without much intervention of Manual book keeping which benefits by adding properties of traceability and security. The proposed system is based on RFID readers and passive RFID tags that are able to electronically store information that can be read with the help of the RFID reader. This system would be able to issue and return books via RFID tags and also calculates the corresponding fine associated with the time period of the absence of the book from the library database.

Keywords- RFID, library database etc.

I. INTRODUCTION

Radio-Frequency Identification (RFID) devices have importance in our daily life and they will become appearing in the near future. There is a tremendous growth in the industry to use RFID technology in the recent years. Research and development in this field has made thistechnology to be used in supply chain management, attendance management, library management, automated toll collection etc. RFID is an electronic technology where by digital data encoded in an RFID tag is retrieve utilizing a reader. In contrast to bar code technology, RFID systems do not require line-of-sight access to the tag In order to retrieve the tag's data. Passive RFID is sure to replace bar codes in library applications. The bar-code system used in libraries is very time consuming and labor intensive.

The RFID based LMS facilitates the fast issuing, reissuing and returning of books with the help of RFID enabled modules. It directly provides the book information and library member information to the library management system and does not need the manual typing.

The RFID tagca contain identifying information which is unique, such as a book's title or code, without having to be pointed to a separate database. The information is read by an RFID reader, which replaces the standard barcode reader commonly found at a library's circulation desk.One step is to decide on which kind of RFID reader and tag is used for library automation. The importance of reader are what kind of tag it reads, its operating frequency, capability of near reading, writing inside the tag ,connection type with computer The reader has two main functions: the first is to transmit a carrier signal, and the second is to receive a response from any tags in proximity of the reader.

A tag needs to receive the carrier signal, modify it in some way corresponding to the data on the card, and retransmit the modified response back to the reader. Further, tags which are located in book are binding with the specific Id. In modern passive RFID devices; the tag consists of a small integrated circuit and an antenna. The benefit of passive RFID is that it requires no internal power source; the circuit on the tag is actually powered by the carrier signal. Thus, the carrier signal transmitted from the reader must

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Alphaneumeric Hand Gesture recognition System

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Abstract- The project introduces an application using computer vision for Hand gesture recognition. A camera records alive video stream, from which a snapshot is taken with the help of interface. The system is trained for each type of count hand gestures (one, two, three, four, and five) OR Alphabets (A, B and C) at least once. After that a test gesture is given to it and the system tries to recognize it.

Keywords- Human interface devices, Automation, CNN, Controller.

I. INTRODUCTION

With the rapid growth of artificial intelligence technology, many intelligent applications have been developed such as smart TV and intelligent robots. The most natural way for humans to communicate with these intelligent systems is dynamic gestures. In recent years, air writing has become one of the most popular dynamic gestures. It is defined as writing alphanumeric with hand or finger movements in a three-dimensional (3D) free space.

Air writing is particularly useful for user interfaces that do not allow the user to type on the keyboard or write on the touch pad/touch screen or for text input for intelligent system control. Air-writing recognition is closely related to motion gestures or sign language recognition. Motion gesture recognition methods can be roughly divided into two categories: device based and device-free. . However, the requirement for handheld or worn devices by contrast, in the device-free method, users do not need to hold or wear any devices; hence, this method is more convenient than the device-based method.

Device-free methods can be further divided into vision-based and radio-based methods. The former utilizes 2D or 3D cameras to capture gesture input images. The latter uses radio sensors such as radar or Wi-Fi to obtain gesture signals. Air writing can be realized in three manners isolated, connected, and overlapped air writing. In isolated writing, the letters are written in an imaginary box with fixed height and width in the field of view of an image, one at a time. In connected writing, multiple letters are written from left to right, which is similar to writing on a paper.

In the last manner, one can write multiple letters stacked contiguously one over another in the same imaginary box. We study the isolated writing style in this paper. Isolated writing is the most essential and popular method. Motion characters are isolated alphanumeric letters written in a uni stroke.

The steps involved in air-writing recognition generally include hand/finger tracking, feature extraction and classification. The fundamental problems in isolated writing include (a) tracking of hand and/or fingers, (b) segmentation of writing acts (or push-to-write), (c) restrictions on the users' writing due to the limitation of an imaginary box, and (d) infraclass variability of the writing patterns of a letter.

For vision-based methods, the first problem has been addressed, but different solutions must be used for 2D and 3D image sensors. 2D camera-based systems often utilize colour markers on fingers to increase tracking performance since finger tracking without markers is challenging. 3D camera based systems address the hand/finger tracking problem well simply using the depth information provided by 3D image sensors such as Kinect, Leap Motion Controller (LMC), or Intel Real Sense camera. Air writing lacks a reference position on the writing plane and thus lacks the beginning and end points of a stroke. Therefore, it needs to automatically detect the start and end coordinates of the characters written in the air. This is referred to as segmentation of writing acts, or the so-called push-to-write problem. One of the possible solutions is to use a specific posture to signal the endpoint of a writing act, e.g., a fist posture.

However, this will increase the number of gestures that users must remember. When depth information is available, the segmentation of writing acts can be done by merely using a depth threshold. In summary, 3D camera-based systems address the first two problems more conveniently than 2D camera-based systems. However, 3D systems are more complex and expensive.

The imaginary box limits the range of writing. It reduces the variations of letter input such as position, scaling or rotation of the written image. This alleviates the burden of the subsequent processing. Nevertheless, from the users' perspective, this method causes inconvenience and restrictions of users. In this paper, we design a

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Industrial Robotic Arm Based on IR Sensor and ARDUINO

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Abstract- This Paper outlines the various stages of operations involved in the pick and place robotic arm. It is an automated material handling system is synchronizing the movement of robotic arm to pick the object moving on a conveyor belt. Nowadays various advanced robots are used in industries but still controlling is done manually or using processors likewise Adriano, microcontroller. But microprocessors have several disadvantages so these disadvantages can be overcome by Arduino. Here Arduino uno is used for controlling and operating robotic arm. All the various problems of this process have been analyzed properly and have been taken into consideration while programming and designing the pick and place robotic arm.

Keywords- Manipulator, Arduino, Controller, and the power supply.

I. INTRODUCTION

The robotic arm is a technical device that consists of the number of components, which are connected to each other using servo motors. The robotic manipulator can perform variety of simple tasks, such as grabbing and moving objects from one position to another. The robotic arm, according to the way it is controlled, belongs to one of the two subtypes: devices, which require human involvement to perform their task or autonomous ones. Autonomous robotic arms are extensively utilized for assembly lines. Such usage of robotic manipulators takes human errors out of equation and leads to the improvement in the quality and complexity of production.

The robotic arms are also used for accomplishing tasks in the unreachable or dangerous conditions for humans, including but not limiting to the radioactive environment and space exploration. First models of robotic arms didn't include any sensors and were expected to do only one specific task. However, throughout the time simple manipulators have become complex devices, which can analyze the environment and make decisions based on the collected data. The simplest devices, used in the modern industry, have two or three servo motors, serving as links for the arm parts, however increase in the complexity of tasks requires arm to have higher number of degrees of freedom.

Even though during the last decade prices on robotic arms became more accessible, industrial robots we see in the market are with high speed, accuracy, which cause heavy expenses. This project can serve as starting point for beginners to assemble and program low cost robotic arm which can be controlled remotely as well as manually by saving selected positions of the arm and then autonomously repeating task until new one is taught.

II. DEVICE FABRICATION & COMPONENTS

- Breadboard
- Three Servo motors
- IR sensor
- OTG
- Data cable
- Arduino
- Jumper wire
- USB Cable
- Smart phone and clamp

III. FLOW CHART

Fig 1 Flow Chart.

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Implementation on Regenerative Braking System Electric Vehicle

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Abstract - *In Regenerative braking system we use to extend battery power of vehicles which is run a electric way. the system is extended with wide range of battery power The Regenerating Breaking System is one such method, to recover a energy that is reused and same it is reduced the break exhaust is emissions. This system works on kinetic energy create by mechanical energy and it's converting to electric energy. These systems offer financial benefits while improves braking efficiency, reduces brake wear and preventing physical damage.*

Key Words: Electric Vehicle RBS, Increased Performance of RBS, Regenerative Braking System, Motor, Energy recover.

1.INTRODUCTION

A Regenerative braking system (RBS) is a energy efficient system, which is used to transform kinetic energy into electric energy. As know that the energy neither distorted nor created. In the crises of energy limitations and way of reduce air pollution will a big problem now a days. This method will improve overall efficiency of vehicles by providing more energy to achieve limited power storing capacity. This advance the capacity of vehicles by converting kinetic energy and mechanical energy into pure electric energy.

In now a day we are use electric vehicles and this vehicles are main drawback is battery power loss so we are solve this issue and implement regenerative braking system.

Mechanical breaking system is very different from of the electric breaking system. In vehicles we use dynamic breaking system in this system we implement special type of break system. When we apply dynamic break there is created kinetic energy and it's converted into unwanted and wasted heat by friction, in RBS where energy is recovered by using electric motor as a generator from. And this energy provide to battery system of vehicles.

2. Literature Review

In this Project we can increase the efficiency and performance of electric vehicles through regenerative braking system. In this system it get the kinetic energy of the vehicle from the wheels and the generator (DC motor) and converts it into for the purpose of battery use. Its done by the motor converting the mechanical energy into electrical energy. This energy is boosted and stored into the capacitor bank through the battery. this mechanism reduces the tear on the friction brakes making it long lasting. The search focused mainly onto the electric vehicles, hybrid electric vehicles. However, more emphasis is placed on literature related to fuel savings objectives rather than on environmental savings on global warming and studies undertaken to reduce the components of harmful emissions. The most important documents to mention here, this paper details the requirements and potential benefits of infrastructure development, challenges and opportunities for the design and deployment of emerging infrastructures associated with plug- in electric vehicles.

3.PROPOSED SYSTEM

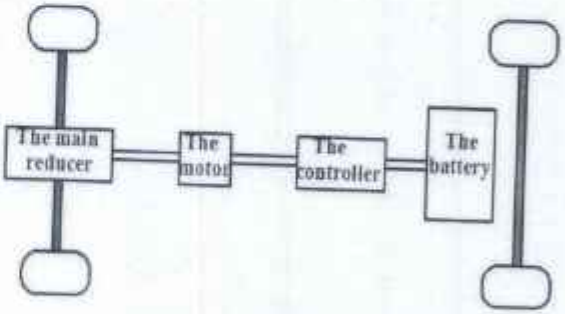

Fig. Front Wheel Drive Vehicle Regenerative Braking System Structure Diagram

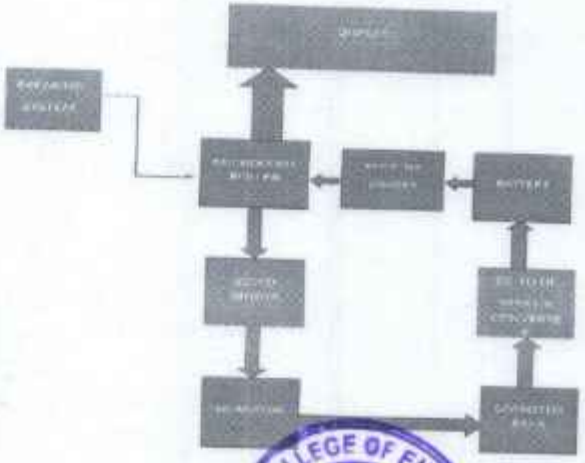

Fig. Block Diagram of Regenerative System

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Design of Battery Management System in Electric Vehicle

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Abstract -*Electric vehicles are used to overcome environmental issues like global warming and greenhouse effect in the automotive world. To promote electric vehicle, the central and state governments have launched incentives with some regulations and standards. In batteries, lithium ion has advantages like lightweight, fast charging, and low self-discharge and long lifespan as compared to Lead-acid battery so it is used widely. The performances of the EVs are affected by driving conditions braking energy recovery strategy. Brushless DC motors has features like speed versus torque characteristics compared to permanent magnet DC Motor , low maintenance, high efficiency and dynamic response, noiseless operation, higher speed ranges, long operating life compared to other motor. Drive controller and battery management system is used to control and operate the motor and battery smoothly for the long run. the above components which will make the electric vehicle which is better option to non-electric vehicle in order to reduce environment issues. This paper deals with design and fabrication of battery management system of electric bike in which electrical power is used.*

Keywords: **Battery, Electric Vehicle(EV), Microcontroller, Battery Management System**

I.INTRODUCTION

Nowadays due to increasing emissions from the vehicles, increases the level of global warming, greenhouse gases and the mass use of fossil fuels, results electric vehicles came into picture as they deliver very good results in performances, safety and efficiencies mileage in recent years. An electric vehicle also called an EV, uses one or more electric motors and controller or traction motors for impulsion instead of fossil fuel. First electric carriage was coming into existence in 1830s and the first electric vehicle was built in United States in 1891.

The types of Electrical vehicle are battery electric vehicle hybrid electric vehicle plug-in hybrid electric vehicle fuel cell electric vehicle. Electric vehicles will play a very important role in changing the environment and also avoiding the pollution around in future. EVs provide fast acceleration and power instantly with smooth feel to the wheels by providing high torque at low speeds; they give a feel of smooth and quick responsiveness.

II.LITERATURE REVIEW

Mr Sai Krishna Vempalli gives physical modeling approach has been used for vehicle modeling to improve the modeling efficiency. Dynamic model of the electric vehicle is designed using Mat lab/Simulink and Sim Power System/Sim Driveline toolbar. Mr. Xiao Juan Liu intoduced the system that can simulate charging load of various types of vehicles, and versatile set of convenience, security and scalability in one. The physical system was established and the load characteristics of EV was modeled with the system, which verified the function of the system and at the same time offered a lot of experience to present for them. This paper[3] taking a electric vehicle motor drive system design as an example, power calculation, motor and drive system design, parameters selection procedures, to elaborate motor driver system.

III. DESIGNING OF ELECTRIC VEHICLE

A. BATTERY MANAGEMENT SYSTEM (BMS)

Battery management system is used for observe the battery voltage, cell voltage, charge /discharge. It is used for short circuit protection and it allows cutting of max allocated voltage that is 2.55V each cell during the charging. During charging ,each cell reach up to 3.6V at that time BMS cuts the power supply from the charger. During the discharging will cut off allocated voltage. BMS is having N-channel MOSFET Basically is used for switching purpose.LM339 comparator is used for to cheek the voltage level of each cell. To keep away from short circuit protection, shunt resister is used. Temperature sensor is used for to measure cell temperature in series.

Table no: 1 BMS Specification

Model Name/Number	Life Po4 BMS 60v 19s 50Amp
Battery Capacity	50Amp
Voltage	60v
Battery Type	Lithium Phosphate
Usage/Application	Lithium Phosphate Battery
Capacity	50Amp
Continues Discharge	50 Amp
Peak Current	100 Amp

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Review of CaRP: CAPTCHA as Graphical Passwords

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ABSTRACT

For Different security purposes, many security systems are used now a day. For number of applications. Authentication is usually done with text-based passwords. The best alternative for text based password is graphical password. This paper is focuse on how to increase the security by using CAPTCHA technique with the graphical passcode. CAPTCHA: Completely Automated Public Turing test to tell Computers and Humans Apart is a technique to identify whether user is a human or a robot. To protect the website from bots CAPTCHA is used as image or a program ie computer generated program. As a graphical passcode, CAPTCHA: CaRP is focused on the CAPTCHA system. CaRP system is the combination of both graphical password and Captcha, it having advantages of both. So many security problems are solved by using this technic such as shoulder-surfing, relay, online guessing etc. CaRP also conquer the disbenifits of graphical passcode system. Mostly occured problem of graphical password is Image hotspot problem which is prevented in CaRP system. The CaRP method looks to integrate well with similar practical applications for improving internet security and delivers reasonable security and accessibility.

Keywords-- CAPTCHA, Captcha Generation, CaRP, Dictionary Attack, Graphical Passcodes, Hash Functionality, Passcode Guessing Attack, Random Passcodes.

INTRODUCTION

Authentication is the nucleus i.e. most important part of any secure system. Any online transaction or the creation of a secure email account requires authentication [1]. In case off-base user_ID and secret word (passward) is entered, the unauthorized get to is conferred to an off-base character, the entire security system will come crashing down. By and large, the conventional alpha-numeric secret word is most common and helpful verification strategy.

However, because of their inherent security and convenience issues, graphical passwords have become an optional option. Fundamentally, there are three sorts graphical passcode schemes [5], ie Recognize based system, Pure Recall based systems, Cued Recall based system [6]. They have overcome a few downsides of alpha-numerical secret word schemes, but most of the current graphical secret word schemes stay powerless to spyware attacks [2].

Clients must enter the secret word by clicking or sketching in the Cued Recall graphical password system. CAPTCHA (Completely Automated Public Turing tests to tell Computers and Humans Apart) could be a programme i.e. code that creates the distorted picture that can be recognised by a person rather than a computer programme. CAPTCHA is presently nearly a standard security component for minimizing unfavourable situations or pernicious Web bot programme. The major web destinations such as Google, Yahoo and Microsoft utilize CAPTCHAs for security and all have their possess CAPTCHAs [3].

A basic task in a security is to create a well-established and low level algorithm that are computationally hard to control. These algorithms are frequently used to build cryptographic protocols for computer security systems. Under

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Review of CaRP: CAPTCHA as Graphical Passwords

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ABSTRACT

For Different security purposes, many security systems are used now a day. For number of applications. Authentication is usually done with text-based passwords. The best alternative for text based password is graphical password. This paper is focuse on how to increase the security by using CAPTCHA technique with the graphical passcode. CAPTCHA: Completely Automated Public Turing test to tell Computers and Humans Apart is a technique to identify whether user is a human or a robot. To protect the website from bots CAPTCHA is used as image or a program ie computer generated program. As a graphical passcode, CAPTCHA: CaRP is focused on the CAPTCHA system. CaRP system is the combination of both graphical password and Captcha, it having advantages of both. So many security problems are solved by using this technic such as shoulder-surfing, relay, online guessing etc. CaRP also conquer the disbenifits of graphical passcode system. Mostly occured problem of graphical password is Image hotspot problem which is prevented in CaRP system. The CaRP method looks to integrate well with similar practical applications for improving internet security and delivers reasonable security and accessibility.

Keywords-- CAPTCHA, Captcha Generation, CaRP, Dictionary Attack, Graphical Passcodes, Hash Functionality, Passcode Guessing Attack, Random Passcodes.

INTRODUCTION

Authentication is the nucleus i.e. most important part of any secure system. Any online transaction or the creation of a secure email account requires authentication [1]. In case off-base user_ID and secret word (passward) is entered, the unauthorized get to is conferred to an off-base character, the entire security system will come crashing down. By and large, the conventional alpha-numeric secret word is most common and helpful verification strategy.

However, because of their inherent security and convenience issues, graphical passwords have become an optional option. Fundamentally, there are three sorts graphical passcode schemes [5], ie Recognize based system, Pure Recall based systems, Cued Recall based system [6]. They have overcome a few downsides of alpha-numerical secret word schemes, but most of the current graphical secret word schemes stay powerless to spyware attacks [2].

Clients must enter the secret word by clicking or sketching in the Cued Recall graphical password system. CAPTCHA (Completely Automated Public Turing tests to tell Computers and Humans Apart) could be a programme i.e. code that creates the distorted picture that can be recognised by a person rather than a computer programme. CAPTCHA is presently nearly a standard security component for minimizing unfavourable situations or pernicious Web bot programme. The major web destinations such as Google, Yahoo and Microsoft utilize CAPTCHAs for security and all have their possess CAPTCHAs [3].

A basic task in a security is to create a well-established and low level algorithm that are computationally hard to control. These algorithms are frequently used to build cryptographic protocols for computer security systems under

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Crop Prediction and Disease Detection Using Machine Learning

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ABSTRACT: Soils are complex mixtures of minerals, water, air, organic matter, and countless organisms that are the decaying ...nains of once-livings things. Soil serves is the media for the extension of all the kinds of the plants. We can say that the soils is an essentials ingredients of the agricultures. There are severals types of soils and each types of soils can have differents kinds of features and differents kinds of crops grows on different types of soils. We must know which type of soil is better in our soil. We can apply machine learning techniques to compartment soil and to predict the crop suitable but there are lots of leaf diseases. Our system predicts the Leaf disease by using image processing. The automatic detection of plant leaf diseases is the highly preferred in the field of agricultural information. Deep Learning is a hot research topics in pattern recognitions and machine learning at presents, it can successfully solve these problems in vegetable pathology. In this study, we propose a new leaf diseases detection method based on the co. olutional neural networks (CNNs) techniques. Using a datasets of the 260 native image of disease and healthy leaves capture from an experimental field. To improves the detections accurateness of leaf diseases and decrease the numbers of networks parameters, CNN model based on deep learning is proposed for leaf disease the detection.

KEYWORDS : Soil series, Land type, Chemical feature, Geographical attribute, machine learning, CNN.

I. INTRODUCTION

There are so many soil series and leaf diseases available in India. Every soil series has different features and every soil is suitable for different crops. Sometimes or we can say every time it happens that farmer soil is best for some specific crop but as he doesn't know. The main purpose of the proposed work is to create a suitable models for a classifying various kinds of the soil series data along with suitable crop suggestions and predict the diseases of leaf also. Series are recognized by the machine learning methods using various chemical feature and the possible crops for that a soil series are suggested using a geographical attributes. Soil is a one of the keys componented of a agricultural fields for a yielded of the crops. Soil classification philosophie follows the existences of knowledge and practicals circumstance. On the land surfaces of earth, classification of soil creates a link between soil samples and various kinds of natural entities.

This project present deep convolutionals networks models to achieves fast and accurate automated detection by using different plant leaf disease images .plant leaf diseases have various symptom. It may be more difficult for inexperienced farmers to detect diseases than for professional plant pathologists. As a verification systems in the diseases detections, an automatic systems that is designed to identify crop diseases by the crop's appearance and visual symptoms could be of great help to farmers. Many effort have been applied too the quick and accurate detections of the leaf disease. By using digital image processing techniques and native networks, we can detect plant leaf disease. Deep learning has made tremendous advances in the past few years. It is now able to the extract useful feature representations from a large number of input images. Deep learning provides an opportunity for detectors to Identify crop diseases in a timely and accurate manner, which will not only improve the accuracy of plant protection but also expand the scope of computer vision in the field of precision agriculture.

II. MOTIVATION

The key motivation for developing this project is as we say every part of the world is developing, but we can see that there is a no such big achievement or a development in soil, crop or disease related to issues. So we can give preferences to the soil field and if we suggest suitable crops to farmers then it is beneficial for them.

PRINCIPAL

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Survey on Translation of Gesture-Based Sign Language

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Abstract- *Most of us communicate our thoughts through voice and facial gestures, but according to the most recent poll, around 1% of the population in India is deaf and mute. These folks interact with others using hand gestures and facial expressions. However, most individuals find it difficult to comprehend gestures. To close this gap, we provide static gesture categorization based on sign language norms, which we subsequently transform to text and speech of a specific local dialect. Approaches for identifying hands and recognizing sign language may be classified into two categories: standard methods and deep learning methods. With the great successes of deep learning in the field of computer vision in recent years, it has been demonstrated that the deep learning approach has many benefits, such as rich feature extraction, powerful modelling capacity, and intuitive training. As a result, this article investigates hand locating and sign language recognition of common sign language using a neural network.*

Keywords- Gesture Recognition, Convolutional Neural Network, Deep Learning, Sign Language Recognition, Human Computer Interaction (HCI).

I. INTRODUCTION

Many deaf children struggle to get a suitable education in India. According to the 2011 Indian census, over 1.3 million persons have "hearing impairment." In comparison, the National Association of the Deaf in India estimates that 18 million persons nearly 1% of the Indian population are deaf.

Dumb individuals communicate via hand signals, therefore normal people have difficulty comprehending their language based on the signs they make. As a result, systems that identify various signs and deliver information to ordinary architecture.

This paper demonstrates how CNN results in extremely high levels of accuracy in solving —computer vision problems. We find a fingerspelling sign language translator with a 95% curacy rate. When we are conducting the project, there are a few finer elements that must be considered.

The thresh must be managed to avoid distorted grayscales in the frames. If we run into this problem, we'll have to either reset the histogram or hunt for regions with good lighting. We may also wear gloves to avoid the issue of the signee's different skin tones. We were able to make accurate predictions in this study after we began testing using a glove.

The basic method to developing a system with the necessary capabilities comprises both hardware-based systems and software-based systems such as computer vision. A hardware-based system necessitates various sorts of accoutrements, like as:

- Hard Disk minimum of 40 GB.
- 2 GB minimum RAM
- Dual Core and up ,15" Monitor.
- Integrated webcam or external webcam and software-based systems like:
- Python
- TensorFlow
- Keras
- pip
- OpenCV

We are working on the model for converting signs to text and speech so dumb and deaf people easily communicate with normal or people like them.

1.1 SIGN LANGUAGE-

Sign language is the most comfortable and natural form of communicating between deaf and mute people, and it is also the primary instrument for special education institutions to educate and express concepts. Sign language is a natural language that communicates meaning through the shape, position, movement, and facial expressions of the hands. Sign language, like other natural languages, has a regulated grammar and a comprehensive vocabulary system. The alphabets in Indian Sign Language (ISL) are shown in the figure 1.

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Survey Paper on Face Mask Detection

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Abstract- *The COVID19 cases spread rapidly in December 2019, in Wuhan, China. The World Health Organization (WHO) stated that it's a dangerous virus which spreaded around the globe. Wearing a mask to protect your face has become the new normal. On the prevention side, wearing a mask is essential during outings or meetings. However, some irresponsible people refuse to wear masks. Due to which, development of face mask detector is crucial. This document represents a simplified approach to achieve Face Mask Detection using packages such as Tensor Flow, Keras, OpenCV, Numpy from machine learning. In this article, we propose a system that limits the growth of COVID19 by discovering people who do not carry any face mask in a network of smart cities where every public places are being monitored by closed circuit cameras (CCTV). When an unmasked person is detected, the corresponding authority is informed via the city network.*

Keywords- Corona virus, Covid-19, Machine Learning, Face Mask Detection, Convolutional Neural Network, Keras, Tensor Flow.

I. INTRODUCTION

This paper introduces a simplified approach to serve the purpose by using the basic packages of Machine Learning (ML) such as Tensor Flow, Keras, OpenCV and MobileNetV2. The rest of the paper is organized as follows: Section II explores current difficulties faced globally and an overview of major topic for the solution. Section III discusses the nature of Deep neural network and presents the details of the package incorporated to build the proposed model. Section IV concludes and draws the line towards future works. Section V points towards the sources that has been referred.

II. PRELIMINARIES OF FACE MASK DETECTION & CNN

According to the WHO's official Situation Report – 205, globally infected over 20 million people by corona virus disease 2019 (COVID-19) has causing over 0.7milliondeaths. Individuals infected by COVID19 have had a wide range of symptoms reported such as going from minor manifestations to serious illness. Problems of respiration like breath shortness or difficulty in breathing is one of them. Elder people having lung disease can possess complications from COVID-19 illness because they appear to be at higher risk. Some common human corona viruses that infect public globally are HKU1, 229E, OC43, and NL63. Before debilitating individuals, viruses like 2019-nCoV, SARS-CoV, and MERS-CoV evolve to human corona viruses by infecting animals. Persons having respiratory problems can expose anyone to infective beads. Surroundings of an infected individual can lead to contact transmission as droplets carrying virus may arrive on his nearby surfaces. To curb certain respiratory infections, including COVID-19, wearing a clinical mask is very necessary. The awareness of public whether to put on the mask for source control or aversion of COVID-19 should be there. Potential reasons of interest of the use of masks is in reducing risk from anoxious individual during the "pre-symptomatic" period. WHO highly recommends on prioritizing use of medical masks and respirators for health care assistants. Therefore, face mask detection has become an important task in global society. Detecting location of the face and then determining if it has a mask on it or not is involved in face mask detection. The issue is proximately cognate to general detection of object to detect the classes of objects. Face identification categorically deals with distinguishing a specific group of entities i.e. Face. It has numerous applications, such as autonomous driving, education, surveillance, and so on. Techniques for Face Mask Detection Convolutional Neural Networks is a type of deep neural network motivated by bio-logical phenomena. A CNN is composed of several components that includes layers such as convolutional layer, pooling layer, along with fully connected layer, also it learns the spatial patterns of data autonomously and fluidly by the use of back propagation method. The CNN kernels are common across entire image positions, making it incredibly parameter-efficient.

III. DEEP NEURAL NETWORK

Human brain is the inspiration behind Deep Neural Networks creation. Working far beyond the "if-and-other" conditions, Deep Neural Network software envisions and delivers solutions. There is no of programming and coding to get the output with Deep Neural Network AI. Deep learning neural networks have become an integral part of the digital world, in many industries. There are world famous virtual

Bird Species Image Identification Using Transfer Learning

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Abstract- *Nowadays, many new fellow Bird Watchers are having a hard time remembering all the bird species and identifying them. Also, common people and newly joined rescue team members are not able to identify bird species to be able to rescue them and treat them. They have to go through a hard way of identifying thick books like "Birds of Indian Subcontinent". In this project paper, we evaluate and show the result of Deep Learning based AI Model which is useful for identifying birds using their images. The paper shows a Simple Web App which uses Transfer Learning, which is one of the best Deep Learning techniques, to identify images. We are going to use the InceptionV3 model made by google to get trained on the dataset of 325 different bird species having 1000 images per species with labels.*

Keywords- Deep Learning, InceptionV3, Bird Identification, Computer Vision, ImageNet

I. INTRODUCTION

BIRD behavior and population trends have become an important issue nowadays. Birds help us to detect other organisms in the environment (e.g. insects they feed on) easily as they respond quickly to the environmental changes. But, gathering and collecting information about birds requires huge human effort as well as becoming a very costly method. In such a case, a reliable system that will provide large-scale processing of information about birds and will serve as a valuable tool for researchers, governmental agencies, etc. is required. So, bird species identification plays an important role in identifying that a particular image of bird belongs to which species. Bird species identification means predicting the bird species belongs to which category by using an image.

The identification can be done through image, audio or video. An audio processing technique makes it possible to identify by capturing the audio signal of birds. But, due to the mixed sounds in the environment such as insects, objects from the real world, etc. processing of such information becomes more complicated. Usually, human beings find images more effective than audios or videos. So, an approach to classify birds using an image over audio or video is preferred. Bird species identification is a challenging task to humans as well as to computational algorithms that carry out such a task in an automatic fashion.

There are around 1700 birds in India. Many researchers or newbies are unable to identify species of birds. Also, sorting this big amount of data will cost human effort and time. This system is proposed to Identify Bird Species using different deep neural network techniques based on Images. Deep Learning techniques include Transfer Learning with Inception V3 Architecture.

Fig 1 : Merlin Application

II. DATA COLLECTION

Finding annotated and labeled data of such a small and rare domain is pretty hard to collect. There are a lot of Instagram and Facebook handles of different photographers who post regularly with labels and information. Web scraping is one way to collect data. But, websites like eBird, Instagram and Facebook don't allow you to scrape the information. So, we collected Data from open source website for world of data, i.e. Kaggle.

We collected and sorted the labeled data of 325 different bird species. The birds have origins from all over the world. This dataset consists of a minimum 400 images to a maximum of 1000 images per species. We have cleaned and resized the data. Cleaning consists of deleting rid of redundant data, converting images into standard and same pixel size to ensure ease of training and speed, removing where there is too

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Online Portal For Booking Handyman Services

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Abstract- *In India there are many people who migrate from state to state for job opportunities and many people select their profession as Handyman or the person with less education primarily chooses their profession as Handyman. Now here lies a problem, There are many people who are in need of skilled Handyman services but neither the people in need nor the skilled workers can contact each other inconvenient ways. Because the people who work as Handyman are not properly educated and have less knowledge of the digital world where they can increase their opportunities exponentially. This design is concentrated on how on-demand apps have disintegrated the maturity of traditional diligence. From the way we travel, eat, shop, and indeed date, all have. experienced a tremendous change. So, why not our ménage chores and errands? After all, we all need an Iron in our lives who can complete our ménage chores and run our. errands in a jiff. Before we understand the nitty-gritty of on-demand home services apps, let us start from the basics at what exact services that it provides. As the name suggests it serves as a platform where you can hire professionals for all your ménage chores at your fingertips. Like all other on-Demands, it's inbuilt with all the essential. functionality. Got a leakage issue at home, hire a plumber near your position who'll fix it. in no time. Got issues with your AC, call an air exertion expert who'll fix your AC in. just a matter of many twinkles. Also, these apps help in fixing problems of carpentry, house cleanliness, home appliances, and all other ménage problems.*

Keywords- Reactjs, Expressjs, Mongodb, Nodejs, Handyman services

I. INTRODUCTION

In India, there is a huge problem of unemployment but on the other side, there are a lot of people who can have the skills to do daily household works or many more things. but they cannot reach the customers so we had created a platform where the skilled worker will get a lot of jobs. It will help to decrease unemployment.

There are a lot of people who are in the search of right handyman skilled worker to get their job done. It can be any kind of work from cleaning the floor to repairing the doorbell. To keep this all process simple we are creating a web application where the user can online book the handyman services. We are MERN stack to develop the application. It includes MongoDB a database, Expressjs which is a javascript framework, Reactjs which is used for developing the frontend of the application, and Nodejs is used for developing the backend of the application.

In this, we are going to add a two-way review system, where a user can give the review to a handyman worker and a worker can give a review to the user. Now the question is why do we need this type of implementation, we have caught some fault from both the user side as well as a worker side so this will help to keep the record of the reviews and it will also help while making any judgment.

II. PROPOSED SYSTEM

A. EXISTING SYSTEM

Urban Clap is an app – based service marketplace that connects customer to service professional. Their strategy is to attach more and more number of consumers to use the platform of Urban Clap to form their life less difficult and cozy . With the rise in Nuclear families, Dual Career couples, the focus of customers is to spend quality time with their families whenever possible. Services at the doorstep at one click of the mouse is welcoming change accepted by customers today, giving rise to business model like Urbanclap, is here to stay for long time. However the success of these businesses is well dependent on how successfully Urbanclap can meet the expectations of its customers, reduce their pain and supply an awesome satisfaction to its customer base.

B. System Architecture

The proposed system consists of actors consisting of a worker and a client. The client has to do the registration and login process as well as Worker has to do the registration and login process, here the worker has to select a service and pay for that service. The user can select the service and handyman after that he/she has to make the payment. When the work is completed the user can give a review to the handyman. Now here even the worker can give review to the user according to his behavior so this will help to give a better judgment when the user raises any complaint.

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CREDIT CARD FRAUD DETECTION USING MACHINE LEARNING AND DATA SCIENCE

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ABSTRACT

In today's lucrative scenario, credit card use has become extremely predominant. It is crucial that credit card companies are capable of recognizing fraudulent credit card transactions so that clients are not levied for items that they did not buy. Such problems can be tackled with Data Science and its significance, along with Machine Learning, cannot be dramatized. This project aims to illustrate the modeling of a data set using machine learning with Credit Card Fraud Detection. The Credit Card Fraud Detection Problem involves modeling past credit card transactions with the data of those that turned out to be a fraud.

This model is then used to realize whether a new transaction is fraudulent or genuine. Machine learning algorithms analyze all the authorized transactions and report the doubtful ones. These reports are explored by professionals who contact the cardholders to confirm if the transaction was genuine or fraudulent. Our goal here is to detect 100% of the fraudulent transactions while reducing the incorrect fraud classifications. Credit Card Fraud Detection is an example of classification that comes under supervised learning. In this process, we have concentrated on analyzing and pre-processing data sets as well as the deployment of multiple anomaly detection algorithms such as Random Forest Classifier, AdaBoost Classifier, CatBoost Classifier, and XGBoost Classifier. Scikit-learn is chiefly written in Python and uses NumPy broadly for speedy linear algebra and array operations. In this project, we have used different algorithms implemented in sklearn library.

Keywords: *Credit Card Fraud, Machine Learning, Scikit-Learn, Random Forest Algorithm, AdaBoost Algorithm, CatBoost Algorithm, XGBoost Algorithm.*

1. INTRODUCTION

In today's lucrative scenario economic losses are gaining speed. There are hackers all around the world. Innocent people are being cheated. There are sometimes when it's very difficult to make out is it a fraud or a genuine record. The data scientists are continuously finding patterns that will give the idea about fraud and genuine records/ transactions. Credit card fraud costs customers and monetary companies billions of dollars annually, and the fraudsters constantly try to find new rules and tactics to commit illegal actions. Thus, fraud detection systems have become vital for banks and financial institutions, to reduce their losses. However, there is an inadequacy of published literature on credit card fraud detection systems, due to limited credit card transactions dataset for scientists. The most commonly used fraud detection methods are Decision Trees, Logistic Regression, and Random Forest classifiers. But amid all existing classifiers, boosting classifiers is recognized as a popular and common method, not because of their quite uncomplicated implementation, but also due to its extraordinary predictive execution on practical problems. Around the world today as every transaction is taking place online and there's less of a physical presence, these frauds have increased drastically. We can consider two types of fraud one in which a credit card is present and the other in which the card is not present. If we ponder over this, we get to know the first type of fraud is very rare or not so common these days but the second one is accelerating. The reason being is, if the physical card was stolen or looted, the authorized person could easily report that issue. On the other hand, if the card holder's details like account details were leaked or misplaced and the fraudster kept it with him for months then it becomes very tedious to make out the source of compromise. The cardholder might be unaware of this until he receives the statement. For this, the cardholders must continuously check their accounts for any fraudulent or unknowing transactions that happened. These credit card frauds are just one type of fraud happening. There are a number of frauds going around in the world, for instance, cell phones, insurance claims, tax return claims, etc. A team of Data Scientists, Data Analysts are constantly working on them and finding out ways to discover frauds and keep the users safe from these losses. They are using techniques of Data mining, Data analysis, and machine learning for obtaining successful solutions to these problems. Mostly the internal control systems are weak and hence, we are using data science techniques to tackle this problem. They are using multiple machine learning, statistics, and artificial intelligence techniques. Let's discuss more datasets, pre-processing, processing, model training, and predictions, in upcoming paragraphs.

In our credit card fraud detection project, we have used a few the machine learning algorithms like bagging and boosting. Our main aim is to compare 4 different classifiers and find the fastest and most accurate one. Then we use this classifier at the backend of a flask application. So, basically, we have a web application that has an ML model running at the backend. This was a bit tricky but an interesting task as we explored the world of Python. Talking more about the dataset we used for training our models is from kaggle.com. This is the only dataset available so far. creditcard.csv has more

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Brain Tumor Detection Using Image Processing and Machine Learning Algorithms

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Abstract: *The purpose of this paper is to implement a Simple Algorithm to detect the range and shape of a brain tumor in MR images. There are many types of tumors, all of which are uncontrolled growths of tissues in any part of the body. Tumors are classified according to their types and they are treated differently according to their characteristics. It is well known that brain tumors are inherently dangerous due to their location within the skull's limited space (the intracranial cavity). According to the majority of research done in developed countries, people who die due to brain tumors are often mistakenly diagnosed. Generally, Imaging of the brain produced by CT scans or MRIs directed into the intracranial cavity is considered complete. During visual examination of this image by the physician, a brain tumor is detected & diagnosed. However, this method of detection limits the ability to accurately determine the stage & size of the tumor. To avoid that, by combining two algorithms, this study uses computer-aided segmentation (detection) of brain tumors as a means of avoiding that issue. Through the use of this method, tumor tissues can be segmented with similar accuracy and reproducibility as that achieved through manual segmentation. This method can also reduce the analysis time. As a result, a tumor is extracted from the MR image and its location and shape determined, and the tumor's stage is calculated from the amount of area calculated from the cluster.*

Keywords: *Abnormalities, Magnetic Resonance Imaging (MRI), Brain tumor, Pre-processing, K-means, Fuzzy C-means, Thresholding.*

I. INTRODUCTION

The paper discusses the concept of automated brain tumor segmentation based on MRI, which usually help to view the anatomy of the brain. The MRI scan is used for the entire process in this paper. A CT scan is less comfortable for diagnosis than a MRI scan. It does not affects the human body in anyway. Because it doesn't use any radiation. It is generally uses the magnetic field and radio waves for the MR image. In the field of brain tumor detection, various kinds of algorithms have been developed. However, they might have some limitations in terms of detection and extraction. In this project, mainly two algorithms are used for segmentation process. Therefore, it gives the accurate result for tumor segmentation. Tumor is because of the uncontrolled development of the tissues in any piece of the body, The growth might be essential or auxiliary, If it is a beginning, then, at that point, it is known as essential. Assuming that the piece of the growth is spread to somewhere else and developed similar to claim then it is known as auxiliary. Regularly cerebrum growth influences CSF (Cerebral Spinal Fluid). It foundations for strokes. The doctor gives the treatment for the strokes as opposed to the treatment for growth. So identification of growth is significant for that treatment. The lifetime of the individual who impacted by the mind growth will increment in the event that it is recognized at current stage. That will expand the lifetime around 1 to 2 years. Typically cancer cells are of two sorts. They are Mass and Malignant. The recognition of the dangerous cancer is fairly hard to mass growth. For the exact discovery of the harmful cancer that needs a three dimensional portrayal of cerebrum and three dimensional analyzer instrument. In this paper we zeroed in on discovery of mass growth detection. The creating stage for the recognition is mat lab. Because it is not difficult to create and execute. Toward the end, we are giving frameworks that identify the growth and its shape.

II. EXISTING METHOD

The current technique depends on the thresholding and locale developing. The it was overlooked the to thresholding strategy spatial attributes. Ordinarily spatial qualities are significant for the threatening cancer discovery. In the
it is considered to thresholding based division the picture as having just two qualities either dark or white. However, the bit map picture contains 0 to 255 dark scale values. So at times it overlooks the growth cells too. If there should be an occurrence of the area developing based division it needs more client connection for the choice of the seed. Seed isn't anything in any case, the focal point of the cancer cells; it might cause power in homogeneity issue. And furthermore it won't give the ideal outcomes for every one of the pictures. The ordinary result for the thresholding is given beneath.

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Automatic Timetable Generater Using Genetic Alogrithm

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Abstract- *To Change the conventional machine of producing timetable. With the assist of Genetic Algorithm may be created Automatic Time Table Generator in order that instructors may be capable of generate timetable easily. It will create timetable for every magnificence and segment. The administrator will assign the personnel their difficulty to a specific time slot. Genetic algorithms a famous meta-heuristic that has been applies to many difficult combinatorial optimization troubles which incorporates scheduling lectures/classes. Time desk technology is tedious process for educationalist with admire to time and guy power. Providing a automated time desk generator will assist to generate time desk mechanically. Proposed machine of our mission will assist to generate it mechanically additionally allows to keep time. It avoids the complexity of putting and coping with Timetable manually.*

Keywords- *Genetic set of rules, timetable, Absent, Teachers, chromosomes.*

I. INTRODUCTION

The magnificence timetabling trouble is a standard scheduling trouble that looks to be a tedious process in each educational institute a few times a year. In in advance days, time desk scheduling changed into achieved manually with a unmarried character or a few organization concerned in project of scheduling it manually, which takes numerous attempt and time. Planning timetables is one of the maximum complicated and error-susceptible applications. Timetabling is the project of making a timetable even as fulfilling a few constraints. There are essentially varieties of constraints, smooth constraints and difficult constraints. Soft constraints are the ones if we violate them in scheduling, the output continues to be valid, however difficult constraints are the ones which if we violate them; the timetable is not valid. The seek area of a timetabling trouble is just too vast, many answers exist withinside the seek area and few of them aren't viable. Feasible answers right here imply the ones which do now no longer violate difficult constraints and as nicely try and fulfill smooth constraints. We want to select the maximum suitable one from viable answers. Most suitable ones right here imply the ones which do now no longer violate smooth constraints to a extra extent.

AAs new technology have emerge as an critical a part of training machine, We have created automated timetable generate the use of notification specification so that it will assist instructors in order to generate timetable. It will create timetable for every magnificence and segment branch the system of producing automated timetable is that administrator will assign the personnel, their specific difficulty at a specific time slot additionally the critical specification of this machine is if the college is absent it'll ship a notification to the HOD in addition to the precept and take a look at whether or not every other college is there to change the lecture with the absent college.

Using Genetics Algorithm, some of trade-off answers, in phrases of a couple of goals of the trouble, may be received very easily. Moreover, every of the received answers has been determined a lot higher than a manually organized answer that is in use

II. LITERATURE SURVEY

Akshay putt swamy, H M Arshad Ali Khan, Chandan S.V, Parkavi.A "A STUDY ON TIMETABLE GENERATOR". Department of Computer Science and Engineering, M S Ramaiah Institute of Technology, Bangalore. In the Year 2018. The key factors encompass the substantial goal of this paper is to supply timetable for any range of guides and a couple of semesters. This machine will assist to create dynamic pages in order that for imposing the sort of machine we are able to employ the distinctive equipment which are broadly relevant and unfastened to use.

International Journal of Interdisciplinary Innovative Research & Development (IJIIRD) ISSN: 2456-236X Vol. 02 Special Issue 03 | 2017 Y Ravi Raju, Mayank Mangal "Web-Based Application for Automatic Timetable Generation" ARMIET Engineering College, sapgaon, Thane, India ravi.raju@armiet.com, mayank.mangal@srmiet.com . In the Year 2017. The key factors encompass Timetable technology

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Automatic Timetable Generator Using Genetic Algorithm

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Abstract- *To Change the conventional machine of producing timetable. With the assist of Genetic Algorithm may be created Automatic Time Table Generator in order that instructors may be capable of generate timetable easily. It will create timetable for every magnificence and segment. The administrator will assign the personnel their difficulty to a specific time slot. Genetic algorithms a famous meta-heuristic that has been applies to many difficult combinatorial optimization troubles which incorporates scheduling lectures/classes. Time desk technology is tedious process for educationalist with admire to time and guy power. Providing a automated time desk generator will assist to generate time desk mechanically. Proposed machine of our mission will assist to generate it mechanically additionally allows to keep time. It avoids the complexity of putting and coping with Timetable manually.*

Keywords- Genetic set of rules, timetable, Absent, Teachers, chromosomes.

I. INTRODUCTION

The Grand timetabling trouble is a standard scheduling trouble that looks to be a tedious process in each educational institute a few times a year. In in advance days, time desk scheduling changed into achieved manually with a unmarried character or a few or Generic Algorithmnization concerned in project of scheduling it manually, which takes numerous attempt and time. Planning timetables is one of the maximum complicated and error-susceptible applications. Timetabling is the project of making a timetable even as fulfilling a few constraints. There are essentially varieties of constraints, smooth constraints and difficult constraints. Soft constraints are the ones if we violate them in scheduling, the output continues to be valid, however difficult constraints are the ones which if we violate them; the timetable is not valid. The seek area of a timetabling trouble is just too vast, many answers exist withinside the seek area and few of them aren't viable. Feasible answers right here imply the ones which do now no longer violate difficult constraints and as nicely try and fulfill smooth constraints. We want to select the maximum suitable ones from viable answers. Most suitable ones right here imply the ones which do now no longer violate smooth constraints to a extra extent.

As new technology have emerge as an critical a part of training machine, We have created automated timetable generate the use of notification specification so that it will assist instructors in order to generate timetable. It will create timetable for every magnificence and segment branch the system of producing automated timetable is that administrator will assign the personnel, their specific difficulty at a specific time slot additionally the critical specification of this machine is if the college is absent it'll ship a notification to the HOD in addition to the precept and take a look at whether or not every other college is there to change the lecture with the absent college.

Using Genetics Algorithm, some of trade-off answers, in phrases of a couple of goals of the trouble, may be received very easily. Moreover, every of the received answers has been determined a lot higher than a manually or Generic Algorithmnized answer that is in use.

II. LITERATURE SURVEY

[1] Akshay putt swamy, H M Arshad Ali Khan, Chandan S.V, Parkavi.A "A STUDY ON TIMETABLE GENERATOR". Department of Computer Science and Engineering, M S Ramaiah Institute of Technology, BanGeneric Algorithmlore. In the Year 2018. The key factors encompass the substantial goal of this paper is to supply timetable for any range of guides and a couple of semesters. This machine will assist to create dynamic pages in order that for imposing the sort of machine we are able to employ the distinctive equipment which are broadly relevant and unfastened to use.

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Patient-Centric and Scalable Electronic Health Record System Using Blockchain And Interplanetary File System

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Abstract- *Electronic Health Records are gaining popularity all around the world. However, their security and privacy concerns have become a concern for most of the users. This paper proposes a mechanism that enables patients to control their records and revoke their access to them.*

Blockchain technology can improve the capability of electronic medical records systems by storing large amounts of data. This framework proposes a way to implement blockchain in the healthcare industry by storing patient records in an on-chain database and implementing off-chain solutions on ipfs that secure the data using cryptography.

Keywords- Blockchain, IPFS, Electronic Health Records, Decentralise, Scalable.

I. INTRODUCTION

Despite the rise of EHR, many hospitals in developing nations still lack the necessary facilities to implement it. The main challenge that they face is the security and privacy concerns related to their data. Due to the sensitive nature of the data that it contains, medical records are regularly attacked by hackers. They usually install malware on the server and then release it once their demands are met. The records are managed by the hospitals that created them. If the facilities lack to implement adequate security measures, the data could be easily manipulated. There is also a lack of uniformity in the way the records are stored.

In India, a government agency known as the National eHealth Authority is working to establish regulations for the use of e-health records. These regulations would help ensure that the records are secure and are not prone to abuse. The new user's metamask ID is stored in the blockchain as well as their Ether account. This is done through the use of the InterPlanetary File System. Ganache is a Chrome Plugin that gives access to a website through Ethereum. The goal of this project is to provide patients with complete control over their data.

Related Works

The study that is focused on the principles and techniques of different development, this system will be able to provide them with the necessary information. Such papers are being reviewed and studied as part of the project's study Survey EC is one of the earliest suggested models for a blockchain-based medical record management system. The Medchain is a blockchain the based application that allows hospitals, patients, and pharmacies to share healthcare data. Data is stored on- chain, but they suffer from privacy and scalability problems.

It uses the Smart Contracts and Ethereum Blockchain to store accessibility details of the health record. But the actual health record is not stored on the Blockchain system, it is stored on the Healthcare Providers database which is operated by a third party. Hence these records are still vulnerable to attack or misuse. The primary difference between MedRec and our approach is that we store the health records in a distributed manner and do not rely on a third-party service provider. Also, we do the use hashes in IPFS which guarantees the immutability of records.

In Blockchain for Healthcare, the patient data is stored on the blockchain and after being encrypted with the patient's private key. This data can be decrypted by using the patient's public key which is provided to users such as Pathology labs and hospitals to whom the patient has given permission. This is in contrast to our approach in which the patients have complete control over who can view their data. In our Framework, the patient's private key is required to decrypt the health data instead of encrypting it. Also, we do not save the data over the blockchain but instead, we use IPFS for the same.

Requirement And Preliminary

The important requirements that need to have happened in an electronic health record management system are

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Electronic Voting System Based on Blockchain

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Abstract- *Building a secure electronic voting system that offers the fairness and privacy of current voting schemes, while providing the transparency and flexibility offered by electronic systems has been a challenge for a long time. In this work-in- progress paper, we evaluate an application of blockchain as a service to implement distributed electronic voting systems. The paper proposes a novel electronic voting system based on blockchain that addresses some of the limitations in existing systems and evaluates some of the popular blockchain frameworks for the purpose of constructing a blockchain- based e-voting system. In particular, we evaluate the potential of distributed ledger technologies through the description of a case study: namely, the process of an election, and the implementation of a blockchain based application, which improves the security and decreases the cost of hosting a nationwide election.*

I. INTRODUCTION

Electronic voting systems have been the subject of active research for decades, with the goal to minimize the cost of running an election, while ensuring the election integrity by fulfilling the security, privacy and compliance requirements [1]. Replacing the traditional pen and paper scheme with a new election system has the potential to limit fraud while making the voting process traceable and verifiable [2]. Blockchain is a distributed, immutable, incontrovertible, public ledger. This new technology has three main features:

(i) Immutability: Any proposed "new block" to the ledger must reference the previous version of the ledger. This creates an immutable chain, which is where the blockchain gets its name from, and prevents tampering with the integrity of the previous entries.

(ii) Verifiability: The ledger is decentralized, replicated and distributed over multiple locations. This ensures high availability (by eliminating a single point of failure) and provides third-party verifiability as all nodes maintain the consensus version of the ledger.

(iii) Distributed Consensus: A distributed consensus protocol to determine who can append the next new transaction to the ledger. A majority of the network nodes must reach a consensus before any new proposed block of entries becomes a permanent part of the ledger.

These features are in part achieved through advanced cryptography, providing a security level greater than any previously known record-keeping system. Blockchain technology is therefore considered by many [3], including us, to have a substantial potential as a tool for implementing a new modern voting process. This paper evaluates the use of blockchain as a service to implement an electronic voting (e-voting) system. The paper makes the following original contributions:

(i) propose a blockchain-based e-voting system that uses "permissioned blockchain", and

(ii) review of existing blockchain frameworks suited for constructing blockchain-based e-voting system.

II. PRELIMINARIES OF E-VOTING AND BLOCKCHAIN

In this section, we first elaborate on the design considerations when constructing an electronic voting system. Then, we provide an overview of blockchain and smart contract technology and its respective feasibility as a service for implementing an e-voting system.

A. Design considerations

After evaluating both existing e-voting systems and the requirements for such systems to be effectively used in a national election, we constructed the following list of requirements for a viable e-voting system:

(i) An election system should not enable coerced voting.

(ii) An election system should allow a method of secure authentication via an identity verification service.

(iii) An election system should not allow traceability from votes to respective voters.

(iv) An election system should provide transparency, in the form of a verifiable assurance to each voter that their vote was counted, correctly, and without risking the voter's privacy.

(v) An election system should prevent any third party from tampering with any vote.

(vi) An election system should not [illegible] any single entity control over tallying votes and determining the result of an election.

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Eye Gaze System

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Abstract- *Computer vision is playing vital role in visual interaction innovations with computers to ease out life. using deep learning and computer vision we can create IO devices that can work on gestures to ease our work. Eye movement can be used as a real-time input medium for human-computer communication, which is especially important for people with physical disability. In order to improve the eye tracking technique using computer vision in user-computer dialogue, a novel eye control system with integrating both mouse and keyboard functions can be created. This technology can be used to control computer system by providing way to move mouse pointer and and access keyboard using gestures for more ease. This paper proposes a a eye gaze tracking system that can be used to control mouse movements and keyboard control using human eye ball tracking using computer vision. It provides hand free control over a system That make user interaction with system more easy.*

Keywords- computer vison, deep learning, eye gaze, CNN, Deep layer, Neural Network.

I. INTRODUCTION

Now a days personal computer systems are playing a vital role in our everyday lives. They are used in areas such as work, education and entertainment. Most of the Systems uses common method to use the personal computers mostly based on the input method via mouse and keyboard. Traditionally We use mouse and keyboard to interact with the computer. But for disabled peoples it is not easy to use this system, also for quick and smooth interactions with computers and to create hand free control or interaction with computers, we need to use eye gaze tracking system. Many disabled people have only the action that they can perform of their own free will is the blinking of their eyes. Because of this, many human interaction systems are developing based on eye gaze. By detecting eye position and tracking the iris movement of the eyeballs many useful interfaces can be developed. Due to the rapid development of technology, there is a great demand for Human- Computer Interaction. Many precious systems are being developed for people to make their life more easy.

This system captures the images and use them to track eyeball movements. To do that we need image processing, the input data is acquired first and then it is converted into digital form. In the digital image, various types of mathematical operations are applied to get a more enhanced image to perform the next operation. There are many systems and applications that are based on human eye tracking. Various kinds of human-computer interfaces exist that make use of human eye movements and eye blinking . Some interfaces make use of eye movement for controlling the mouse cursor. The movements of the eyes shall be detected using basic webcams with resolution enough to capture the slightest eyeball movements and no external devices will be necessary. The project aims at designing a Software that cab be easily installed into a Desktop or Laptop. the software shall make use of a webcam to capture real time images of the user and then process these images to detect the eye.

II. RELATED WORK

There are several methods to track the motion of the eyes. The most direct method is the fixation of a sensor to the eye. The fixation of small levers to the eyeball belongs to this category, but is not recommended because of high risk of injuries to the eyes.

1) Video-Based Eye Tracking:

The main task of a video based eye tracker is to analyze the direction of gaze from the image frame delivered by a video camera. All video-based eyetracking systems needs to detect the iris center in the camera's image frame. This is a task for image recognition, mainly edge detection, to predict and analyze the elliptical contour of the pupil. As the human cornea has a nearly perfect sphere shape, a glint stays in the same position for any direction of gaze while the pupil moves. There are some eye trackers which also track the rotational movement of the eye but such systems are not very common. One of the application for such eye . trackers is a head camera controlled by the eye movements using the motion stabilization softwares and hardwares of the eye to get a motion stabilized camera image.

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Smart Human Activity Detection

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ABSTRACT

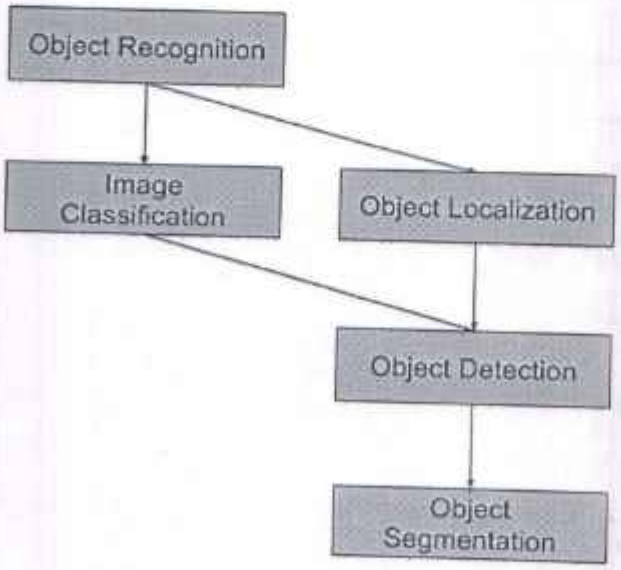
Recognition of human activity has a wide range of applications in medical research and security systems. In this project, we create a YOLO-based Human Activity Recognition System. Object Detection, Fall Detection, Social Distancing Detection, and Vehicle Crash Detection are four human actions that we created a four Yolo-based recognition system to recognize. Four passive learning approaches were used to train and assess the activity data: Cmake, CUDA, Cuda CNN, and Dark Net neural networks. In the Liris Human Activities dataset, we show that YOLO is an effective and fairly fast method for recognition and localisation. .

Keywords:Object Detection,Deep Learning,Neural Networks, YOLO Algorithm.

Introduction

Understanding human activities has become one of the most popular study issues in computer vision.Recognition of human activity is important in human-to-human interaction and interpersonal relationships. It is tough to extract since it contains information about a person's identity, personality, and psychological condition.One of the key objects of study in the scientific fields of computer vision and machine learning is the human ability to recognize another person's activity.

YOLO is a novel way to object detection. Classifiers have been repurposed to do detection in previous work on object detection. Rather, we consider object detection to be a regression issue with spatially separated bounding boxes and associated class probabilities.



PRELIMINARIES OF SMART HUMAN ACTIVITY DETECTION

First, we'll go over the design considerations for building an electronic voting system in this part. Then, we'll go through blockchain and smart contract technology, as well as their suitability as a service for constructing an electronic voting system.

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Number Plate Detection Using Machine Learning

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Abstract- *In this project we aim to make an application which will help for traffic police in each state for doing their work very efficiently and in very small time. Automatic vehicle detection and recognition is a key technique in most of traffic related applications and is an active research topic in the image processing domain. Auto Recognition of License Plate is a kind of image processing technology for recognizing the number plate information from images.*

Keywords- number plate detection, image, optical character recognition (OCR), license plate (LP), license plate localization.

I. INTRODUCTION

In traffic there are various vehicles going in a brief span and number plate abstraction is a difficult task, basically because of number arrangement, and impact of environmental work.The observed plate images are normally in low resolution and suffer severe loss of edge data, which cast, incredible test to existing vehicle number plate detection and recognition patterns.

Automatic vehicle detection and recognition is a key technique in most of traffic related applications and is an active research topic in the image processing domain. Different methods, techniques and algorithms have been developed for vehicle detection and recognitions but they are not useful for toll plaza. The system is designed to deal with unclear vehicle plates, variations in weather and lighting conditions, different traffic situations, and high-speed vehicles images. Number plate detection of license plate method comprises of three segments: Character segmentation, Optical character recognition and template matching.The data sets include images that were captured from crossroads, streets, and highways, in day and night, various weather conditions, and different plate categories.

Workflow Diagram –

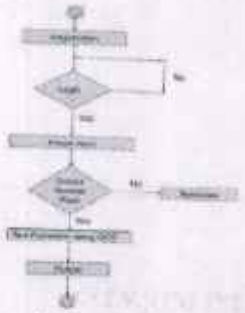

Fig1: work flow diagram

The first step i.e. to capture image of vehicle looks very easy but it is quite exigent task as it is very difficult to capture image of moving vehicle in real time in such a manner that none of the component of vehicle especially the vehicle number plate should be missed. after that traffic police can login into the system. He will give captured image as input.to the system. System will do preprocessing task will do the necessary task to identify the number plate. user will receive number plate as a output .

II. SYSTEM ARCHITECTURE

fig2. contain all the component of the system. First login into the system. Then give captured image as a input. Pre-processing is done on image. wavelet helps to develop signals into multiple scales. After converting image into different scales feature extraction of image takes place. with the help of OCR algorithm number detection also classification of a number plate take place.at end final output is shown on screen.

Fig2 system architecture

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Review Paper on

"DESIGN AND TESTING OF LIGHTWEIGHT SANDWICH T-JOINT OF COMPOSITE MATERIAL USING FEA AND EXPERIMENTAL TECHNIQUE"

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Abstract- This study offers a comprehensive review of the research related to the Composite T-joint for the combination of materials -Glass fiber, Epoxy Resin and PVC foam. Data were obtained from numerous articles between the years of 1976 to 2018 in journals. The content of the study is distinguished based upon the study of composite materials, study of composite T-joint, study of FEA analysis of composite structures, study of delamination composite sandwich core. The preeminent defect that occurs in composite t-joint is the undefined failure at the joint which is the only complex part in composite structure. Many researchers have done most of the study to analyze how actually the t-joint fails and the failure conditions. Many attempts have been made to overcome this problem by CFD or by Finite Element Analysis approach composite structure, but there is ample scope for modelling of composite t-joint and use of composite materials.

Keywords – Composite T-joint, Composite Materials, sandwich core, Glass Fiber, PVC foam, Epoxy Resin.

1. Introduction

The process to manufacture composite structures is a bit complex and requires skills. Composite t-joint is mainly crafted by casting or hand lay-up technique. The sandwich core is which supporting part is built by coating the PVC with glass fiber and epoxy resin. The resin binds with the glass fiber which eventually increases the stiffness of the PVC foam board. Lamination of the core parts is the critical part in manufacturing of sandwich core. The adhesion of the resin should be strong enough to hold the structure together. The t-joint mainly fails due to the delamination of the core parts. Different angles are provided to the model to test which holds good to expectations. There is a need for lots of modification in modelling for the enhancement of the future of composite structures.

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AN ANALYTICAL STUDY OF IMPACT OF ENTREPRENEURSHIP ON ECONOMIC EMPOWERMENT OF WOMEN

Dr Sunil Kant Verma & Dr Vaibhav Patil & Dr. Dhananjay Bagul

ABSTRACT

Investing in women's economic empowerment offers an exact route to gender equality, poverty eradication, and sustainable economic development. The research paper is an attempt to check the impact of entrepreneurship on the monetary authority of women. To check the suitability of data, research has used the Jarque-Bera test to confirm data normality. To compare the change in women entrepreneurs' economic condition before and after the commencement of business, t-tests for two independent samples were applied on a sampled data set of 30 respondents. Based on the research results, it was found and concluded that Entrepreneurship has led to women's economic empowerment.

Keywords: Entrepreneurship, Economic Empowerment, Women Empowerment.

Introduction

Women (n/d) have reported that "Investing in the economic empowerment of women is a clear road to gender equality, the eradication of poverty and sustainable economic development. Women make tremendous contributions to markets, whether in corporations, on farms, as entrepreneurs or workers, or by doing unpaid care work at home.

However, poverty, inequality, and abuse remain overwhelmingly affected. Gender inequality means that women often end up in low-wage, dangerous jobs, and make up a small minority of senior positions. Access to economic assets such as land and loans is limited. It inhibits involvement in shaping economic and social policies. Moreover, since women do much of the household work, there is also little time left for them to seek economic opportunities."

Furthermore, the United Nations Development Program (n/d) elaborated that "to achieve gender equality and sustainable growth, women's economic empowerment is crucial. As food producers, managers of natural resources, and entrepreneurs and workers, women are essential contributors to economies. Additionally, women are the primary providers of unpaid care and domestic work - women do

2.6 times the unpaid care and domestic work that men do globally.

Active action is required to resolve systemic barriers and gender-discriminatory practices in a comprehensive manner, which deny women their socio-economic rights, limit their economic, social, and political opportunities, and weaken their resilience to all types of shock. It includes addressing the disproportionate burden of unpaid care work for women, including the participation of men in care work, ensuring equal opportunities for women to property, credit, land and natural resources, decent work and equal access to social services, including health care".

The government of India's Startup India Initiative states that "Women entrepreneurs are women who organize and manage an organization, mostly a corporation. The growing role of women as entrepreneurs has led to a shift in the demographic features of the country's market and economic development. Women-owned businesses play a prominent role in empowering others in society and creating more job opportunities.

Sustainable growth of female entrepreneurs is required to foster balanced growth in the country, and Start-up India is committed to strengthening the ecosystem of female entrepreneurship through policies and initiatives and the development of enabling networks".

Literature Review

Madan et al. (2014), in their paper 'Women Empowerment through Entrepreneurship,' found that Entrepreneurship, through growing family, economic, social, and financial status, is an essential tool for empowering women in the country. It was concluded from this study that empowerment brings equality between the sexes and also improves women's overall status in the family, community, and country. Banik and Bai (2018), in their research 'Women Empowerment through Entrepreneurship with Special reference to Vendors in Agartala' found that the study ends with the findings that much growth is seen in consciousness, self-reliance, and freedom of women due to participation in entrepreneurial activities, the socio context including variables, form, and mode of operation, training programmes the significant problems. Kavitha and Rajan (2014), in their article', Empowering Women through Entrepreneurship: Challenges and Advantages,' found that the need of the hour is economic freedom.