List of Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Calendar Year of publication	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Dr. Brijendra Gupta	PROTEIN INTERACTION AND DISEASE GENE PRIORITIZATION IN NEUROPSYCHIATRIC DISORDERS	PROTEIN INTERACTION AND DISEASE GENE PRIORITIZATION IN NEUROPSYCHIATRIC	HEALTH INFORMATICS: A COMPUTATIONAL PERSPECTIVE IN HEALTHCARE	HEALTHCARE 2020	International	2020	978-981-15-9734-3(ISBN)	Siddhant COE, Pune	Springer Singapore
2	R R Kulkarni	A review on roller burnishing process using hybrid nanofluids	A review on roller burnishing process using hybrid nanofluids	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
3	Dr. Brijendra Gupta	Survey Paper on Stock Prediction Using Machine Learning Algorithms	Survey Paper on Stock Prediction Using Machine Learning Algorithms	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
4	Rashmi Kulkarni	Gesture Recognition Based Virtual Mouse and Keyboard	Gesture Recognition Based Virtual Mouse and Keyboard	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
5	Jyoti tale	Secure File Storage on Cloud using Hybrid Cryptography	Secure File Storage on Cloud using Hybrid Cryptography	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
6	Rashmi Kulkarni	Recipe Detection of Image Using Deep Learning	Recipe Detection of Image Using Deep Learning	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
7	Dr. Brijendra Gupta	Development of Flutter Application JSP with the help of Artificial Intelligence	Development of Flutter Application JSP with the help of Artificial Intelligence	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
8	Prof. Sushma Shinde	Exploring the Potential of Fantasy Sports Gaming with Cryptocurrency	Exploring the Potential of Fantasy Sports Gaming with Cryptocurrency	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
9	Prof. Aparna Thakre	Automated Emotion Analysis on Twitter Using Machine Learning and Deep Learning	Automated Emotion Analysis on Twitter Using Machine Learning and Deep Learning	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
10	Prof. Sushma Shinde	A Survey Paper on Academic Certificate Verification Using Blockchain	A Survey Paper on Academic Certificate Verification Using Blockchain	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
11	Sarika B. Shinde	Comparison of Barrel Vaults	Comparison of Barrel Vaults	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
12	Prof. Rupali Panpaliya	Digital Leave Tracking System	Digital Leave Tracking System	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
13	Prof. Aparna Thakare	Research Paper on Drug Pill Recognition System	Research Paper on Drug Pill Recognition System	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
14	Dr. Khushbu Rahangdale	YOLOv4-Based Object Recognition Algorithm for Traffic Monitoring	YOLOv4-Based Object Recognition Algorithm for Traffic Monitoring	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET

15	Prof. Rupali Panpaliya	JARVIS: Voice Controlled AI for Help Human	JARVIS: Voice Controlled AI for Help Human	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
16	Prof. Sushma Shinde	Cloud Based E-Learning Platform with Machine Learning	Cloud Based E-Learning Platform with Machine Learning	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
17	1 Prof. Kalyani Kadam	To Design and Implement vehicle Ignition Control System by using Face Detection & Recognisation System using Raspberry Pi & IoT	To Design and Implement vehicle Ignition Control System by using Face Detection & Recognisation	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
18	Prof. Aparna Thakare	Blockchain-Based Insurance Claim for Farmers with Smart Contract	Blockchain-Based Insurance Claim for Farmers with Smart Contract	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
19	Rashmi Kulkarni	Medical Chatbot in Artificial Intelligence and Machine Learning to Help Human	Medical Chatbot in Artificial Intelligence and Machine Learning to Help Human	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
20	Prof. Sushma Shinde	Online Voting System Using Cloud Computing	Online Voting System Using Cloud Computing	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
21	Prof. Rahul Kulkarni	Experimental Study and Simulation of Test Loop Flow Characteristics for Vertical Pumps	Experimental Study and Simulation of Test Loop Flow Characteristics for Vertical Pumps	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
22	Prof. Aparna Thakare	A Survey Paper on Smart Human Activity Detection Using Yolo	A Survey Paper on Smart Human Activity Detection Using Yolo	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET
23	Prof. Pratiksha Kale	Smart Mirror Technology with Home Automation	Smart Mirror Technology with Home Automation	ICRTET 2023	ICRTET 2023	International	2023	In Process	Siddhant COE, Pune	IJRIET

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Volume 932

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Health Informatics: A Computational Perspective in Healthcare

Springer

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Preface

Computing technique is one of the key technologies that is being currently used to perform medical diagnostics in the healthcare domain, thanks to the abundance of medical data being generated and collected. Nowadays, medical data is available in many different forms like MRI images, CT scan images, EHR data, test reports, histopathological data, doctor–patient conversation data, etc. This opens up huge opportunities for the application of computing techniques, to derive data-driven models that can be of very high utility, in terms of providing effective treatment to patients. Moreover, machine learning algorithms can uncover hidden patterns and relationships present in medical datasets, which are too complex to uncover, if a data-driven approach is not taken. With the help of computing systems, today, it is possible for researchers to predict an accurate medical diagnosis for new patients, using models built from previous patient data. Apart from automatic diagnostic tasks, computing techniques have also been applied in the process of drug discovery, by which a lot of time and money can be saved. Utilization of genomic data using various computing techniques is other emerging areas, which may in fact be the key to fulfilling the dream of personalized medications. Medical prognostics is another area in which machine learning has shown great promise recently, where automatic prognostic models are being built that can predict the progress of the disease as well as can suggest the potential treatment paths to get ahead of the disease progression. Our book on *Health Informatics: A Computational Perspective in Healthcare* presents at attracting research works, to demonstrate the potential and the advancements of computing approaches to utilize healthcare centric and medical datasets.

Silchar, India

Dr. Ripon Patgiri
Dr. Anupam Biswas
Dr. Pinki Roy

Contents

About the Editors

Dr. Ripon Patgiri is currently working as an Assistant Professor at the Department of Computer Science & Engineering, National Institute of Technology Silchar. He has received his B.Tech., M.Tech. and Ph.D. degree from the Institutions of Electronics and Telecommunication Engineers, Indian Institute of Technology Guwahati and National Institute of Technology Silchar, respectively. His research interests are big data, bioinformatics and distributed systems. He has published several papers in reputed journals, conferences and books. Also, he was General Chair of 6th International Conference on Advanced Computing, Networking and Informatics. Currently, he is General Chair of International Conference on Big Data, Machine Learning and Applications to be held during 16–19 December 2019 at National Institute of Technology Silchar. Moreover, he is an organizing chair of 25th International Symposium Frontiers of Research in Speech and Music (FRSM 2020), to be held during 08–09 October 2020. He is also an organizing chair of International Conference on Modeling, Simulations and Optimizations (CoMSO 2020), to be held during 3–5 August 2020. Furthermore, he is a Guest Editor of "Big Data: Exascale computation and beyond" in EAI Transaction on Scalable Information Systems and Guest Editor of "Internet of Things: Challenges and Solutions" in "EAI Transactions on Internet of Things". He reviewed many research articles from KSII Transactions on Internet and Information Systems, Electronics Letters, EAI Endorsed Transactions on Energy Web, EAI Endorsed Transactions on Scalable Information Systems, ACM Transactions on Knowledge and Data Engineering, IET Software, International Journal of Computational Vision and Robotics, Journal of Computer Science, International Journal of Advanced Computer Science and Applications and IEEE Access. Also, he served as TPC member in many conferences. He is a senior member of IEEE, member of ACM, EAI and ACCS and associate member of IETE.

Dr. Anupam Biswas is currently working as an Assistant Professor at the Department of Computer Science & Engineering, National Institute of Technology Silchar. He has received his B.Tech., M.Tech. and Ph.D. degree from Dibrugarh University, Motilal Nehru National Institute of Technology Allahabad and Indian

Institute of Technology (BHU) Varanasi respectively. His research interests are social networking, review mining, sentiment analysis, machine learning and soft computing. He has received the Best Paper Award for the paper titled "Community Detection in Multiple Featured Social Network using Swarm Intelligence" in International Conference on Communication and Computing (ICC-2014), Bangalore. Also, he has received Reviewer Award from Applied Soft Computing Journal (IF 3.541), Elsevier, 2015 and 2017, and Physica A: Statistical Mechanics and its Applications (IF 2.243), Elsevier, 2016. He has published several papers in reputed journals, conferences and books. He is a reviewer of IEEE Transactions on Fuzzy Systems (TFS), IEEE Transactions on Evolutionary Computation (IEEETEVC), IEEE Systems Journal (IEEE-SJ), IEEE Transactions on Systems, Man and Cybernatics: System (IEEE TSMC), Applied Soft Computing (ASOC), ACM Transactions on Knowledge Discovery from Data (TKDD), ACM Transactions on Intelligent Systems and Technology (TIST) and Physica A: Statistical Mechanics and its Applications and Information Sciences.

Dr. Pinki Roy is currently working as an Assistant Professor at the Department of Computer Science & Engineering, National Institute of Technology Silchar. Dr. Pinki Roy received her B.Tech. degree in Computer Science & Engineering from Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra (2002, First class with distinction) and M.Tech. degree (2004, First class with distinction) from Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra. She has received her Ph.D. degree in the year 2014 in the field of Language Identification from National Institute of Technology, Silchar, Assam-788010, India. She was working as a Lecturer in Naval Institute of Technology, Colaba, Mumbai, India. (from February 2004 to August 2004). Her research interests include language identification, speech processing, machine intelligence and cloud computing. She has published several papers in reputed journals, conferences and books. She has received several awards which are listed below—1. "Distinguished Alumnus Award", Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra, 2014. 2. "Young Scientist Award", Venus International Foundation, Chennai, 2015. Awarded for major contribution in research during Ph.D. 3. "Rastriya Gaurav Award", India International Friendship Society, New Delhi, 2015. 4. "Bharat Excellence Award", Friendship Forum, New Delhi, 2016. 5. "Best Golden personalities Award", Friendship Forum, New Delhi, 2016. 6. "Global Award for Education", Friendship Forum, New Delhi, 2016. 7. Honoured as one of the "Most Distinguished Lady Alumni" by Computer Engineering Department of Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra, India.

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Survey Paper on Stock Prediction Using Machine Learning Algorithms

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***Abstract* - Stock Market Prediction is a challenging and trending topic for researchers in recent years. Although it contains significant risk, it is frequently utilized in investment schemes that promise big returns. The returns on stocks are quite erratic. They are influenced by a number of variables, including prior stock prices, current market trends, financial news, social media, etc. There are many methods used to forecast stock value, including technical analysis, fundamental analysis, time series analysis, and statistical analysis, however none of these methods has been demonstrated to be a reliable forecasting method. In order to improve the accuracy of stock price prediction, a variety of machine learning approaches and algorithms are examined in this study.**

Keywords: CNN, ARIMA, LSTM, Stock price, Machine learning.

I. INTRODUCTION

The stock market has a significant impact on a country's economic performance. Its prediction has been very tiresome and troublesome since markets' existence, and one of the most significant problems faced by many stockholders is predicting its price. It is an area where prediction does not follow any rules as the nature of the market is very volatile. Due to its volatile nature and high risk, there is a high return on investments, but 95% of the traders make losses in the stock market because they try to gamble by randomly speculating the prices or movement and lack a proper trading setup. The share market is based on the concept of demand and supply. If the demand for a particular company's stock is higher and the supply is low, then that company's share price would tend to increase and if the demand for company's share is low then the company share value tends to decrease. The successful prediction of a stock's price by its analysis could lead to a significant profit. This reinforces the idea that time series patterns have great predictive potential and a high likelihood of producing lucrative trades and high returns for investment in company by using extraordinarily large historical data sets to show different conditions. The primary goal of this research is to improve stock price prediction systems so that investments grow, and investors can optimize their earnings. PREDICTION METHODS: 1. By attempting to calculate a security's native value, fundamental analysis estimates securities. It is a technique for figuring out the true or "fair market" value of a stock. The stock is seen as being underestimated and a buy recommendation is issued if the fair market value is higher than the current market price. 2. Technical analysis seeks to anticipate price fluctuations in the future, giving retailers the information, they need to turn a profit. Charts are used by traders to identify entry and exit points for potential trades using technical analysis tools.

II. RELATED WORK

The artificial neural network work that has been proposed by K. Srinivas, M. Sreemalli, P. Chaitanya [1] is a very well-liked method for support vector machines and stock market price prediction. List the benefits and drawbacksof each model and contrast how the stock market is executed using these models. On machine learning issues like categorization and prediction, artificial neural networks (ANN) look to have a lot of potential. using a nonlinear mapping technique in which the input vector is fed into a high-dimensional feature space to execute nonlinear class partitions using a linear model. Time series data are handled by the ARIMA model. The prediction of Nifty bank data is done in this paper using machine learning techniques like Support Vector Machine, Artificial Neural Network, and Auto Regressive Integrated Moving Average. Here, the 2015 Nifty bank dataset is used.

Chetna Utreja, Indu Kumar, Kiran Dogra, Premlata Yadav [2] proposed to get over these stock issues, by machine learning approaches that have been used for stock price prediction. Five models have been built and their performance in predicting stock market trends is compared in this research. Support Vector Machine (SVM),Random Forest, K-Nearest Neighbor (KNN), Naive Bayes, and SoftMax are the five supervised learning methods. Thefindings of the probing indicate that the Nave Bayesian Classifier performs better for smaller datasets and the Random Forest algorithm performs best for larger datasets.

Kamal Nayan Reddy Challa, Venkata Sasank Pagolu, Ganapati Panda [3] proposed the project to investigate the relationship between public opinions expressed on Twitter and changes in a company's stock price, including climbs and

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Recipe Detection of Image Using Deep Learning

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***Abstract* - Food is necessary for human existence, and people are always trying out new, tasty dishes. People frequently select food products from grocery stores that they don't even know the names of or that they don't immediately recognise. It's crucial to understand which elements may be combined to create delicious cuisine recipes. For a beginner chef, picking the proper recipe from a list of items is really challenging. Even for specialists, it may be a challenge. Machine learning is constantly being used in our daily lives. One such instance is object recognition using image processing. Even though there are many different food items involved in this procedure, traditional methods will result in a higher risk of error. ingredients. Deep learning and machine learning techniques can be used to overcome these issues. In this research, we constructed a model for identifying food ingredients and created an algorithm for recipe recommendation based on identified ingredients. We created a unique dataset with 9856 photos divided into 32 types of food items. We used a Convolution Neural Network (CNN) model to recognise food items, and machine learning to generate recipes. We had a 94% accuracy rate, which is extremely helpful.**

Keywords: Deep Learning, CNN, Indian Food, Picture recognition; MAX pooling; Convolution filters; Convolution layer; Convolutional Neural Networks.

1. Problem Statement

The server will house the Indian Food Classification application. As a consequence, a user or visitor can utilize image processing to look for recipes in the application. A user or visitor can use image processing to look for recipes in the application.

2. Introduction

People nowadays are more careful of their food and nutrition in order to avoid either approaching or present ailments. Because people rely on smart technology, the availability of an application that automatically monitors an individual's nutrition is beneficial in a variety of ways. It raises people's awareness of their eating habits and diet. Throughout the last two decades, research has concentrated on automatically recognising food and nutritional information from photographs acquired with computer vision and machine learning algorithms. It is crucial to accurately estimate food's caloric content in order to analyse dietary consumption. The majority of individuals overeats and don't exercise enough. Today's busy and stressed-out society makes it simple to neglect to maintain track of their food intake. This simply highlights how crucial it is to classify foods correctly.

Lately, the number of intelligent applications for smartphones, including Android and iPhone models, has greatly expanded. They have the power to balance consumers' eating patterns and alert them to harmful meals. Smartphones' processing capability has risen as a result of developments in the many technologies that are employed in them. They have the computational ability to analyse real-time multi-media data, but standard mobile devices cannot. As a result, photos are sent to high-processing servers, increasing transmission costs and delays. Given that modern cellphones can also handle high-quality photographs, the development of real-time apps that take photos and rapidly train machine learning models is the main goal of research on classifying foods. To prevent illnesses like diabetes, high blood pressure, and other issues, preventive is key.

Self-reporting and manually recorded equipment are used in several of the current dietary evaluation techniques. The problem with these methods of evaluation is that participants often underestimate and underreport their food intake, which leads to bias in the participant's judgement of their calorie intake. Improvements to the existing techniques are needed in order to boost accuracy and lower bias. A mobile cloud computing system, which utilises tools like cellphones to collect nutritional and calorie data, is one such potential option. The next stage is to automatically analyse the calorie and diet data using cloud computing power for an impartial evaluation. Users must still manually enter the data, though. Many attempts have been undertaken in the last several years to conduct research and create visual-based dietary and calorie information analysis. The effective extraction of information from food photographs, however, is still a difficult problem.

Convolutional neural networks have been used in this article to attempt to categorise food photos for further diet monitoring applications (CNNs). The CNNs have been used for the purpose of classifying foods since they can handle enormous amounts of data and can estimate the attributes

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Development of Flutter Application JSP with the help of Artificial Intelligence

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***Abstract* - It is a mobile application, a platform where job seekers can make their profile and apply for suitable job profiles. It is AI powered JSP (job Search portal). Adding a chatbot to a website or mobile app can lead to better customer service. Thus, the chatbot market is projected to grow from $2.6 billion in 2019 to $9.4 billion by 2024, with an annual growth rate of 29.7%. Job seekers would be able to match with jobs across the globe through their resume, and they "do not need to spend Lakhs buying an Online Degree just to stand out." In recent years, Artificial intelligence has become popular in development of mobile applications. As it brings huge profits, allows you to manage business risks and scale the impact on the application environment. Job seekers from different educational background can easily filter job application and apply for right profile. And all the data is handled in the backend with the use of Firebase.**

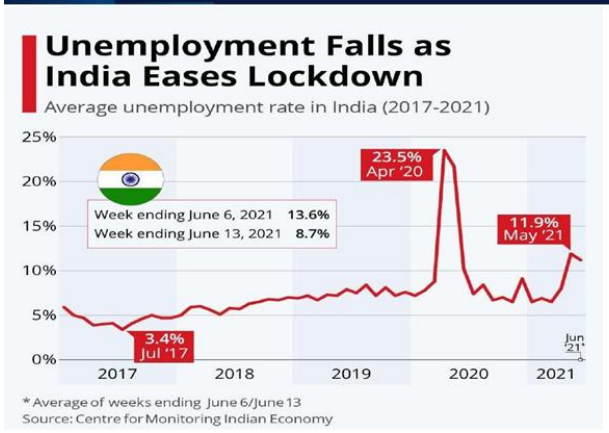
Keywords: Flutter, Firebase, Artificial Intelligence (AI), Kompose, Chat-Bot, JSP.

I. INTRODUCTION

AI based Job Search Portal (JSP) is a flutter Application, which serves jobseekers to find available job openings and help's recruiters to select eligible candidate for the role and manage the recruitment process easily. There are numbers of difficulties for job seekers to find a perfect job opening for a particular role, as most of the similar applications have vast amount of job profiles but does not provide a reliable solution for customer care and for problem solving. In this application AI based chatbot is integrated to solve most of common problem related to application profile building and making which decreases the traffic to human handles and provides immediately servers to customers. With the help "Kommunicate.io" (Kompose) chatbot is integrated in the application. MNC's does not charge any kind of fees for selection process they just need trusted partner for job postings. As this application is totally free to use user must create profile and ready to apply for a dream job. With the Online Job search portals, the recruitment process is speeded up at every stage from job postings, to receiving applications from candidates, interviewing process.

II. MOTIVATION

Unemployment occurs when a person who is actively searching for employment is unable to find work. Constant increase in population has been a big problem in India. The purpose of developing AI based Job Search portal was to cut bridge between problems facing between the recruiter and job seeker. The quick automated response that the chatbot generated helps the customers save the time and get time to time response to their queries and questions. As AI can handle different and difficult quires and it is not able to answer it diverts the conversations to human agents. posting job openings is normal but handling problem occurred in it is a different thing, we tried to solve this unique problem by implementing chatbot in it. Most of student are not aware of the correct platform for applying jobs. This application helps them as they can get all the opportunity in one single application.



III. OBJECTIVE

The objective of this application is to provide flexibility to the jobseekers by providing the functionalities of job search. Students and hiring manager can login using google

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Exploring the Potential of Fantasy Sports Gaming with Cryptocurrency

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***Abstract* - Despite the fact those crypto currencies have drawn a lot of users and investors. Play-to-earn economies have also been rather popular in blockchain technology over time. Fantasy sports games have become incredibly popular. A fantasy sport is a simulation game in which players take on the role of owners to create and oversee fictional teams or groups of tokens that engage in competition. The gaming platform "Crypto11" uses the blockchain technology itself to enable fantasy gaming so that players can play and win large. An Avalanche connection makes fantasy gaming easier, faster, and smoother than it has in the past. Users of this platform will be given a set budget from which to choose a selection of tokens. Let's say your portfolio of crypto tokens does astronomically well. The amount of your award will then be determined by how well those tokens perform. Your knowledge of the stock and cryptocurrency markets will be tested by this platform. 'Crypto 11' is your chance to win large money if you think you understand how the market functions and how a few cryptocurrencies will fare. You can converse with other individuals while playing on this platform. Using a combination of Greedy and Knapsack Algorithms to prescribe the combination of 11 Cryptocurrencies. It provides a range of gaming options, many of which let you immediately win rewards.**

Keywords: Cryptocurrencies, Greedy, Knapsack, Blockchain technology, Fantasy Sports, Tokens, Competition, Crypto11, Portfolio.

I. INTRODUCTION

Crypto11 is the best online cryptocurrency fantasy game experience for cryptocurrency fans is the motivation Cryptocurrencies and fantasy are the foundation of our identity. We are building a platform that will let real bitcoin enthusiasts fulfil their ambitions. Our goal is to increase user competency so that they can play fantasy games in an entirely secure setting. There is Crypto11 for individuals who are curious about cryptocurrency! We believe that one excellent reason to play fantasy games is the potential for financial reward, but it's not the only one. Imagination is enjoyable since it increases the thrill of witnessing a competition. Crypto11's main objectives are to please users, solidify their position as the most dependable fantasy gaming platform, and give them the opportunity to make money with their skills.

Cryptocurrencies have become increasingly popular in recent years, and with their rise, the demand for understanding and analysing them has grown exponentially. To meet this need, a new fantasy sports platform has been developed that combines the excitement of gaming with the ability to learn and predict the behavior of cryptocurrencies. This platform offers users the opportunity to make predictions and win money based on the performance of a carefully curated selection of 11 cryptocurrencies.

The selection of these currencies is determined using a combination of Greedy and Knapsack algorithms, which prescribe the most effective combination for optimal performance. Through this innovative approach, users can gain valuable insights into the world of cryptocurrencies while enjoying the thrill of competition and the potential for monetary rewards. Fantasy sport is an increasingly significant social phenomenon. It is played by more than 13 crores Indian and by millions of others worldwide. As an industry, it has been estimated at between INR 34,000 crores market and its participants are those particularly attractive to marketers: young professionals, who are college-educated. Over the past five years, the industry's reach has rapidly expanded to become the largest in the world, and in our sports-obsessed nation, client acquisition is only accelerating.

II. WORKING PRINCIPLES OF CRYPTOCURRENCIES

A cryptocurrency is a peer-to-peer digital exchange system in which currency units are created and transferred using cryptographic methods. Using this method, transactions are distributed verified without the use of a centralised authority. Transaction verification ensures transaction amounts, as well as whether the payer holds the currency or is simply trying to spend it, while also making sure that no additional currency units are used. Mining is the name given to this checking process.

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Automated Emotion Analysis on Twitter Using Machine Learning and Deep Learning

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***Abstract* - Twitter has become a popular platform for expressing emotions and opinions. Emotion analysis can be useful in various fields such as marketing, politics, and healthcare. In this research paper, we propose an automated emotion analysis system using machine learning and deep learning techniques on Twitter data. We collect a large dataset of tweets and annotate them with six basic emotions: happy, sad, angry, surprised, disgusted, and fearful. We then preprocess the data by removing stop words and performing stemming. We extract features from the preprocessed data using techniques such as bag-of-words and TF-IDF. We experiment with several machine learning and deep learning algorithms and compare their performance. Our results show that deep learning algorithms such as LSTM and CNN outperform traditional machine learning algorithms such as SVM and Naive Bayes. Our proposed system achieves an accuracy of 80% in emotion classification, which is higher than the state-of-the-art methods.**

Keywords: Automated System, Emotion Analysis, Twitter, Machine Learning, Deep Learning.

I. INTRODUCTION

Emotion analysis, also known as sentiment analysis, is the process of identifying and classifying emotions in text. With the rise of social media platforms, such as Twitter, emotion analysis has become an important research area. Twitter is a microblogging platform that allows users to express their emotions and opinions in real-time. Emotion analysis on Twitter can provide valuable insights for various applications such as marketing, politics, and healthcare.

In this research paper, we propose an automated emotion analysis system using machine learning and deep learning techniques on Twitter data. We collect a large dataset of tweets and annotate them with six basic emotions: happy, sad, angry, surprised, disgusted, and fearful. We preprocess the data by removing stop words and performing stemming. We extract features from the preprocessed data using techniques such as bag-of-words and TF-IDF. We experiment with several machine learning and deep learning algorithms and compare their performance.

II. RELATED WORK

Previous research on emotion analysis on Twitter has focused on various aspects such as feature extraction, sentiment lexicons, and machine learning algorithms.

(2010) Compared different machine learning algorithms for sentiment analysis on Twitter data.

III. METHODS

1) Dataset
2) We collected a dataset of 10,000 tweets using the Twitter API.
3) We annotated the tweets with six basic emotions: happy, sad, angry, surprised, disgusted, and fearful.
4) We used the EmoLex lexicon (Mohammad and Turney, 2010) for emotion labeling. The dataset was randomly split into training (70%), validation (10%), and test (20%) sets.

IV. PREPROCESSING

1) We performed several preprocessing steps on the dataset.
2) First, we removed stop words and punctuation from the tweets.
3) Then, we performed stemming using the Porter stemmer algorithm. Finally, we converted the text to lowercase.

V. FEATURE EXTRACTION

1) We used two feature extraction techniques: bag-of-words and TF-IDF.
2) In the bag-of-words approach, we created a vocabulary of all the words in the corpus and represented each tweet as a vector of word frequencies.
3) In the TF-IDF approach, we weighted the word frequencies by their inverse document frequency.

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A Survey Paper on Academic Certificate Verification Using Blockchain

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***Abstract* - In According to the statistics of the Indian Ministry of Education, there are around 1 million graduates every year, of whom 4,444 will go to the country, high school or university to continue their education and 4,444 will be ready to enter a job. All certificates of achievement, transcripts, graduation certificates etc. received by the students during their education will be important documents for new school or new job admission. Only schools and students entered as schools awarded many awards or certificates. Because there is no effective way to prevent fraudulent transactions, there are often situations that lead to fraudulent certificates. To solve the certificate fraud problem, a digital certificate based on blockchain technology will be prepared. Using modified tools of the blockchain, digital certificates can be created that prevent fraud and have proofs. The process of issuing a digital certificate through the system is as follows. Before creating the electronic file of the certificate, add and store other important information in the file and also calculate the hash value of the electronic file. Finally, the hash value is stored in a block in the chain system. The system will generate an interactive QR code and a question string code to be added to the certificate. The application verifies the authenticity of the certificate by sending a mobile or web query. The system changes the nature of the blockchain, not only increasing the reliability of various certificates, but also electronically reduces the risk of various types of certificates.**

Keywords: Academic Certificates, University, Fraudulent Certificates, Blockchain System.

1. Introduction

E-certificate generation system which manually creates the certificates based on cur- rent students data. Various centralized methods follow the similar approach for verification. The centralized approaches can't defend the various network attacks like SQL injection, Collusion, bruited force etc. Blockchain approach using decentralized approach. Fog computing or fog networking, also known as fogging, is pushing frontiers of computing applications, data, and services away from centralized cloud to the logical stream of the network edge. Fog networking system works on to build the control, configuration, and management over the Internet backbone rather than the primarily control by network gateways and switches those which are embedded in the LTE network. We can illuminate the fog computing framework as highly virtualized computing infrastructure which provides hierarchical computing facilities with the help of edge server nodes. These fog nodes organize the wide applications and services to store and process the contents in close proximity of end users.

2. Existing System

During our research, we were able to find some of the works done which were related to our field. Following are some of the findings:

In [1], in a permissioned Blockchain (Hyperledger Fabric), a user, depending upon the kind of authorization given to it, on login can query or manipulate any Blockchain data. This paper highlights the effects of resume fraud. Authors have created a platform for companies and universities using Hyperledger. Institutions can store student data and companies can store recruiting info on the platform. Users can query or manipulate student or recruit info.

In [2], the main method is to create a hash of the fingerprints of the students which will be stored in the block and for verification, the recruiter just needs to scan the fingerprints of the candidate.

In [3] published in the year 2020, Simply using the hash number which was generated while creating a block as a corresponding to the original document and verifier can use this 'hash-key' to fetch the original document from the Blockchain.

In [4], before handing certificates to the students, a hash of its digital version would be calculated and stored in a chain-system when students apply for a job in any company. The recruiters would just have to upload the digital document given by the candidate, a hash will be generated and then compared, and the result of real or forged will be displayed.

In [5], A Blockchain application wherein, a digital version of the paper certificate would be obtained, then the

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Comparison of Barrel Vaults

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***Abstract* - This study compares the performance of barrel vaults made of reinforced concrete (RCC) and steel grid structures. Barrel vaults are commonly used in the construction of large span structures such as airports, sports arenas, and exhibition halls. RCC and steel grid structures are two of the most popular construction materials used for barrel vaults. This study examines the structural performance and cost-effectiveness of these two materials using statistical analysis. The analysis is based on data collected from case studies of several barrel vault structures constructed using RCC and steel grid materials. The results show that RCC barrel vaults have a lower cost per unit area than steel grid barrel vaults, but steel grid barrel vaults have a longer service life and require less maintenance.**

Keywords: Barrel vault, RC barrel vault, Double Layer Grid, Slab type barrel vault, cost- effectiveness.

1. Introduction

Now a day the growth of construction is increased and required maximum space and large span. The barrel vault is the best for large span structures. The popularity of barrel vaults is partially due to the economy of these structures, At the same time, their cylindrical shape provides a great deal of volume under the roof, a distinct advantage for railway stations, or for large span warehouses, providing a welcome increase in their storage space. Barrel vaults are lightweight and cost-effective structures that are used to cover large areas such as exhibition halls, stadium and concert halls. These structures provide a completely unobstructed inner space, and they are economical in terms of materials compared to many other conventional forms of structures as explained by Makowski [11].

2. Space Frame

Space frame is a sophisticated structural system that combines elegance and efficiency to achieve large, uninterrupted spans. Its unique geometric configuration allows for both structural strength and aesthetic appeal, making it a popular choice for a variety of architectural applications. Space frames offer significant advantages over traditional structural systems, including lighter weight, reduced material consumption, and faster installation times. With its striking visual impact and impressive engineering capabilities, space frame continues to push the boundaries of modern architecture.

1) Flat Lattice
2) Lattice Dome
3) Barrel vault

Flat Lattice

A space frame is a structure system assembled of linear elements so arranged that forces are transferred in a three-dimensional manner. In some cases, the constituent element may be two dimensional. Macroscopically a space frame often takes the form of a flat or curved surface. It should be noted that virtually the same structure defined as space frame here is referred to as latticed structures A latticed structure is a structure system in the form of a network of elements (as opposed to a continuous surface). Rolled, extruded or fabricated sections comprise the member elements. Another characteristic of latticed structural system is that their load-carrying mechanism is three dimensional in nature. Flat lattice is composed of planner unit which connected with unit beams pace plane covers. These spatial structures are composed of planar substructures. Their behavior is similar to that of a plate in which the deflections in the plane are channeled through the horizontal bars and the shear forces are supported by the diagonals. Flat lattices can have one, two, three or even multiple layers, but they are widely used in the form of two layers. Double-layer lattices consist of two parallel plates which are jointed together by elements.[1,2,12]

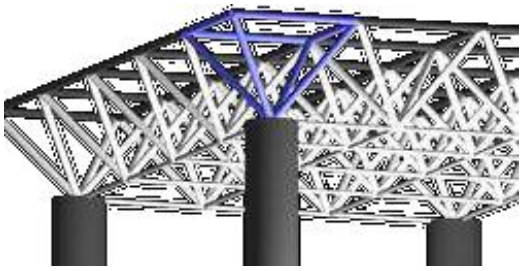

Figure 1: Double Layer Grid Flat Lattice

Lattice Dome

Dome is a lattice has curvature in two directions Domes are structures with high rigidity and are used for very large

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Research Paper on Drug Pill Recognition System

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***Abstract* - Vision loss and forgetfulness are two aspects of aging and are normal processes. The elderly may be affected by these deformities, which may put them at risk during daily activities. Inappropriate drug use is one of the most dangerous problems. These mistakes pose a great risk to the health and life of the elderly. In addition, current solutions to this problem are designed for professionals or the public, without covering the needs of the elderly. As the first part of a large collection of devices designed specifically for the elderly, imaging devices have been proposed to help fill this lack of assistance. The concept continues to use its form, size and material for steps such as photography and tablet. Colour Tablet data in the local database is used to characterize and store the system during operation. The same feature then calculates and analyses the data during the authentication process to provide users with useful information about the authenticated tablet.**

Keywords: Healthcare, Blind, Pill Recognition, Image Processing, CNN.

I. INTRODUCTION

This help does not come from the health care system. Therefore, based on current technological developments (mobile only), we propose a different approach for this system. This solution was developed as part of a larger adult computer vision system. Computer technology is being used to create solutions that help seniors identify medications. Decisions that are part of a matter of medical knowledge must be independent and reliable. [9].

Blind or visually impaired elderly people often take the wrong medicine or forget to take it. This study also addresses this issue. Patients with visual impairment who use this wrong drug suffer greatly and cannot receive adequate help for this. Eliminating the need to specify a procedure for the capsule in patients with permanent blindness solves this problem. Drug safety in patients with visual impairment can be ensured using the instructions. [7].

This article describes the methods that visually impaired people use to identify drugs in tablets. Part I introduce the topic and provide an example. After Part II evaluates the data analysis of various data and the data generated for validation, Part III provides the recommended structure for the system.

II. LITERATURE REVIEW

Various strategies have been proposed by various researchers. The approach is presented in this section. Various related tools have been created and modified to provide relevant functionality (such as pill detection and medication notification) and encourage safe drug use.

D.Ushizima, A. Carneiro, M. Souza, and F. Medeiros. "Investigating pill recognition methods for a new national library ofmedicine image dataset"

Accurate drug identification has become an important issue in patient care and safety. Using the National Library of Medicine's (NLM) newly available tablet image database for search and characterization, this study searched for descriptions of tablets. The authors describe their investigation of using the NLM method for tablet image segmentation and the various features they extracted to compile the dictionary and tablet combination for the body of the tablet according to FDA standards. Evaluation of the 1,000 most popular drugs in the US, providing masks and sample matrices for NLM tablets using graphs to provide reproducible results, and the discussion of fitting our organization's knowledge process to core content, understanding that our tablet is part of collaboration Recognition automation done in pieces use image search.

B.Z. Yaniv, J. Faruque, S. Howe, K. Dunn, D. Sharlip, A. Bond, P.Perillan. "The national library of medicine pill image recognition challenge: an initial report"

The US Library of Medicine launched a competition in January 2016 to develop and discover effective methods and software for assessing image quality of drug users, similar to the drug images in the RxIMAGE registry. The need for doctors and the public to quickly identify unlabeled drugs is the driving force behind this campaign. These features will help identify drugs in situations where the drug and data are separated, such as in a disaster or emergency, when the drug is changed from a brand to a generic, or when the drug's shape and colour changes. Other reasons. This is the first step to support the development of the NLM software system and API to facilitate drug information.

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Research Paper on Drug Pill Recognition System

[1]Anish Roham, [2]Prof. Aparna Thakare, [3]Niraj Zunjarrao, [4]Sahil Bhore, [5]Prajwal Poojary

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***Abstract* - Vision loss and forgetfulness are two aspects of aging and are normal processes. The elderly may be affected by these deformities, which may put them at risk during daily activities. Inappropriate drug use is one of the most dangerous problems. These mistakes pose a great risk to the health and life of the elderly. In addition, current solutions to this problem are designed for professionals or the public, without covering the needs of the elderly. As the first part of a large collection of devices designed specifically for the elderly, imaging devices have been proposed to help fill this lack of assistance. The concept continues to use its form, size and material for steps such as photography and tablet. Colour Tablet data in the local database is used to characterize and store the system during operation. The same feature then calculates and analyses the data during the authentication process to provide users with useful information about the authenticated tablet.**

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YOLOv4-Based Object Recognition Algorithm for Traffic Monitoring

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Abstract **- Intelligent transportation systems currently require reliable, real-time vehicle detection from visual and audio data for traffic monitoring, and these activities have become crucial in recent years. Machine learning is one of the most important technologies to address this issue since it allows for the perception of information about the environment around the vehicle, which is vital for safe driving. In this study we have implemented the upgraded YOLOv4 video stream object detection algorithm in combination with virtual detector, blob tracking to analyse the video footage of the traffic flow recorded by a camera. Also, we have applied Open CV Computer Vision library to detect objects from the image, track, count and classify the moving vehicles.**

Keywords: YOLOv4, Vehicle detection, Open CV, Machine Le.

1. Introduction

What is vehicle detection?

The main goal of Vehicle detection and counting in traffic video projects is to develop and implement methodology for automatic detection and counting of moving vehicles on highways. Intelligent visual surveillance (IVS) for road vehicles is a key feature to intelligent transportation systems (ITS). Segmentation with initial background subtraction method is used to detect and count vehicles and same method using morphological operators to determine salient regions in surveillance video sequential frames. Edges are being counted to show how many areas of particular size which have particular vehicles like car locate the points and count the vehicles in the traffic domain and monitoring over it on highways.

2. Related Theories

In YOLO for object detection, OPENCV, Coco Dataset, SORT.PY are the methodology used to detect and count the vehicles. The proposed system involves a Convolutional neural network which is a type of artificial neural network. The system is used to detect, recognize and t rack the vehicles in the sequence of video frames, after that classification of vehicles is done which are detected in accordance with their size in different classes. YOLO with convolutional neural network (CNN) for detecting moving objects in real-time and object tracking with OpenCV.

3. Software Requirement & Document Specification

This project involves various system requirements to be included to successfully implement the project. The requirements are specified in the description below.

System Requirements

A) Minimum Hardware Requirements:

a) Laptop/Computer/Monitor

B) Software Requirements:

a) Python-3.x(We used python 3.8.8 in this project)
b) OpenCV-4.4.0
c) Numpy-1.20.3
d) YOLOV3

C) Programming languages

a) Python

4. YOLO Object Detection

Object detection is a difficult task which involves rising upon methods for object recognition, objects localization, and object classification. The "You Only Look Once," is a group

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JARVIS: Voice Controlled AI for Help Human

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***Abstract* - This Paper considers an overview of speech recognition technology, Software development, and its applications. The first section deals with the description of speech recognition process, its applications in different sectors, its flaws and finally the future of technology. Later part of report covers the speech recognition process, and the code for the software and it is working. Speech Recognition is the process of automatically recognizing a certain word spoken by a particular speaker based on individual information included in speech waves. In this project, we will use algorithms for the speech recognition which will implement on JAVA for platform independent facility this system can be used for any security system in which the person authentication is required.**

Keywords: Speech recognition, signal processing.

1. Introduction

Speech Recognition is the process of automatically recognizing a certain word spoken by a particular speaker based on individual information included in speech waves. This technique makes it possible to use the speaker's voice to verify his/her identity and provide controlled access to services like voice based biometrics, database access services, voice based dialing, voice mail and remote access to computers. In this project, we will use algorithms for the speech recognition which will implement on JAVA for platform independent facility. This system can be used for any security system in which the person authentication is required.

Speech is the most natural way to communicate for humans. While this has been true since the dawn of civilization, the invention and widespread use of the telephone, audio-phonic storage media, radio, and television has given even further importance to speech communication and speech processing.

The advances in digital signal processing technology has led the use of speech processing in many different application areas like speech compression, enhancement, synthesis, and recognition humans. While this has been true since the dawn of civilization, the invention and widespread use of the telephone, audio-phonic storage media, radio, and television has given even further importance to speech communication and speech processing.

The objective of the current research is

- To understand the speech recognition and its fundamentals
- Its working and applications in different areas
- Its implementation as a desktop Application
- Development for software that can mainly be used for:

1) Speech Recognition
2) Speech Generation
3) Text Editing Tool for operating Machine through voice.

2. Problem Statement

In this 20'th century everything is based on Computer. As we can see there are lots of enterprises which are developing so advanced technologies that can true shape the future of our world that we are living in. Nowadays we use several different technologies that make our life easy.

So we required various software for making our life quite a bit easy. We required software for protection and security of our machine, developers use eclipse for making programming easy, we use Google engine for searching etc. In short we are surrounded by software.

3. Proposed System

In Today's world we use keyboard and mouse for operating our computer normally. This is where our software comes into practice. Using this software we can fully operate our computer with our own voice. Its sounds a quite hi-tech and quite impossible but it's true, this can happen.

Today various company our working on it to make advance into this Speech Recognition System technology. Cause the system will fully reduce the use of the keyboard and just. Just you will require a Mic or Bluetooth device from which we can give a voice input to the system.

It's all in one technology as for security mechanism you will use your voice as a security password you will operate the computer with our voice and perform the entire task that do by

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Cloud Based E-Learning Platform with Machine Learning

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Abstract **- Cloud computing is the latest and rapidly growing technology that has brought new changes and opportunities in the field of education and IT industries. Consequently, e learning emphasizes more on technology to transform and provide training and education to learners. E-learning system using cloud computing platform introduces efficient and effective learning mechanism. In this paper, we briefly discuss the effectiveness of cloud-based e-learning along with its issues, challenges, and benefits. The analysis suggests that the cloud computing platform for e-learning is quite feasible and effective that brings greater clarity landscape anent to cloud computing assistances. With the increasing popularity of cloud-based services, there is a need for an e-learning platform that can take advantage of the cloud to provide more scalable and reliable service. This paper presents a cloud-based e-learning platform that uses machine learning to provide a more personalized learning experience. The platform uses a cloud based architecture to provide scalable and reliable service. It also uses machine learning to provide a more personalized learning experience. The platform has been designed to be easy to use and to provide a high-quality learning experience.**

Keywords: Cloud Computing, Machine Learning, Deep Learning.

1. Introduction

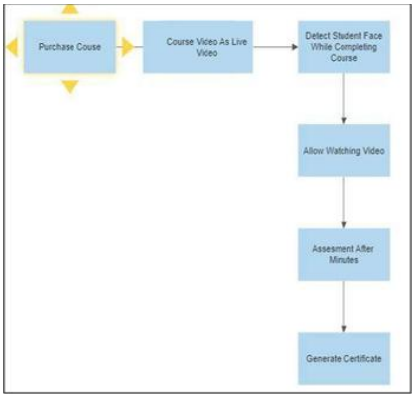
Cloud-based e-learning platforms offer many advantages over traditional learning platforms, including the ability to scale quickly and easily, the flexibility to customize the learning environment to the needs of each individual learner, and the ability to connect learners with experts from around the world. Machine learning can further enhance the effectiveness of cloud-based e-learning platforms by personalizing the learning experience for each individual learner and providing real-time feedback and recommendations. Cloud-based learning is online learning that takes place in the cloud – a virtual space that is not tied to any one computer. There are various cloud-based learning management systems available, and they bring with them a whole host of benefits for the classroom at all educational levels. Enhance the quality of learning and teaching. Meet the learning style or needs of students. Improve the efficiency and effectiveness. Improve user-accessibility and time flexibility to engage learners in the learning process.

2. Problem Statement

With the increasing popularity of cloud-based learning platforms, many educational institutions are looking to develop their own versions of these platforms to increase student interaction and engagement. Machine learning can be used to develop these platforms by providing recommendations on what content to include based on student interactions and preferences. Additionally, machine learning can be used to monitor student progress and identify areas where they may need assistance.

3. Proposed System

With the increasing popularity of cloud-based learning platforms many educational institutions are looking to develop their own versions of these platforms to increase student interaction and engagement Machine learning can be used to develop these platforms by providing recommendations on what content to include based on student preferences. Additionally machine learning can be interactions and Used to monitor student progress and identify areas where they may need assistance.



System Architecture

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To Design and Implement vehicle Ignition Control System by using Face Detection & Recognisation System using Raspberry Pi & IoT

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***Abstract* - Enhancement in vehicle technology system is getting increased research popularity and adding a vehicle theft security system in order to avoid getting vehicle theft in the parking and sometimes driving in unsecured places. The proposed system provided security and better theft control by using facial recognition. When the unauthorized person try to start the ignition it will be notified by the IOT application. If owner want to allow user to start the vehicle then by text msg link of webpage is given. The system uses Microprocessor raspberry pi along with a pie cam and a WIFI controller installed in the vehicle the implemented system is very simple with greater security for vehicle anti-theft protection and low cost technique compared to others.**

Keywords: Power supply unit, Raspberry pi, pi camera.

1. Introduction

Providing high security to the vehicle to avoid theft by using facial recognition with the help of data stored in the default program sometime it creates problem because the face could not be match due to irregular face and uneven brightness on the face ,to overcome this issue we are using open CV using haar classifier[1]. GSM is specialized type of modern which accept a sim card and operate just like a mobile phone. it is utilized to provide information to the owner and alert him with a message having webpage which include access information of vehicle. The term Security designates to for fend the conveyance from an unauthorized person. There are many features (both safety and security.) which have been implemented in the earlier years. In the author has implemented a system to provide collision avoidance system utilizing Bluetooth technology as well as sensors, whereas, the author in have endeavoured to implement a system to evade collision due to rash driving and drunken driving.

In the author was controlling the ECS system by utilizing micro controller which communicates with ESC system utilizing CAN bus. The security features which have been implemented earlier have been discussed [4].

2. Related Work

Poushya, k. Rup sari, N. Supritha, K. Hema and R. Tejaswini (Electronics and Communication Engineering), VVIT, AP. they describe about the mechanism of vehicle to avoid theft and send the notification through IOT application, when the unauthorized person try to start the vehicle and simultaneously it track the location regularly [1].

Amritha Nag, Nikhilendra J N and Mrutyunjay Kalmathg (Dept of Embedded system) sense, VIT University their existing a system with the IOT based and describe about a reliable traditional security system using a Raspberry pi under image capture, face detection and recognition. The system was programmed by PHYTON and programming language Both real time face recognition from specific images [2].

Prof K..T. Jadhao and Prashanth Balraj Balla (Electronics and Telecommunication Engineering) ARIET, Thane, Maharashtra. They implement the system with IOT for the particular face with real time variations by using facial recognition [3].

Prabal Deep Das and Sharmila Sengupta (Electronics and Telecommunication Engineering) VSIET, Mumbai. Are proposed a system with MATLAB. Which provide security to the vehicle prevent from the accident under the safety and security using Bluetooth module, camera and sensors avoiding the occurrence of collision as well as the accident control [4].

S.Padmariya and Esther Annlin KalaJames (Department of Production Technology) Madras institute of Technology, Anna University, Chennai. it gives the information of human face color , To detect whether the object facing towards the camera is face or any other object by using an algorithm name as ad boost algorithm. This can be done by converting weak classifier into high classifier.[5].

In this project we using raspberry pi 3 B+ under the micro USB power supply which the input voltage is 5V and the input current is 2A .Depending on peripheral devices [6].

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Gesture Recognition Based Virtual Mouse and Keyboard

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Abstract **- Now a day's computer vision has reached its zenith, where a computer can identify its proprietor using a simple program of image processing. In this stage of development, people are using this vision in numerous aspects of day-to-day life, like Face Recognition, Colour discovery, Automatic auto, etc. In this design, computer vision is used in creating an optic 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, indeed perform right and left clicks using different gestures. Also, the keyboard functions may be used with some different gestures, like using one cutlet gesture for ABC elect and four- figure gesture to swipe left and right. It'll act as a virtual mouse and keyboard with no line or external bias. The only tackle aspect of the design is a webcam, and the coding is done on python using Anaconda platform. Then the Convex housing blights are first generated and using the disfigurement computations an algorithm is generated and mapping the mouse and keyboard functions with the blights. Mapping a couple of them with the mouse and keyboard, the computer will understand the gesture shown by the stoner and act consequently.**

Keywords: Convex Hall, Image Processing.

1. Introduction

Driver exhaustion might be a vital considers an outsize kind of car collisions. Late insights gauge that yearly one, 200 passing and seventy-six, 000 wounds will be ascribed to weakness associated crashes. The occasion of advances for exploring or forestalling state in the driver's seat might be a noteworthy test inside the segment of mishap dismissing frameworks. As aftereffects of the peril that state presents out and about, ways that purchased to be constrained to be produced for neutralizing its effects. The point of this venture is to build up an encapsulation state discovery framework. the most concentrate square measure expecting to be put on emerging with a framework which will precisely screen the open or shut condition of the driver's eyes in timeframe. By recognition the eyes, it's accepted that the side effects of driver weariness will be identified early enough to dodge a car crash. Identification of weariness includes a succession of pictures of a face, and moreover the perception of eye developments and squint examples. The investigation of face photographs might be an inescapable examination territory with applications like face acknowledgment, virtual devices, and human recognizable proof security frameworks. This venture is focused on the restriction of the eyes, which includes seeing the total picture of the face, and choosing the situation of the eyes by a self created picture handling rule. When the situation of the eyes is discovered, the framework is intended to check whether or not the eyes square measure opened or shut and acknowledge weakness.

2. Literature Survey

Research on the Hand Gesture Recognition Based on Deep Learning. With the rapid development of computer vision, the demand for interaction between human and machine is becoming more and more extensive. Since hand gestures can express enriched information, the hand gesture recognition is widely used in robot control, intelligent furniture and other aspects. The paper realizes the segmentation of hand gestures by establishing the skin colour model and AdaBoost classifier based on haar according to the particularity of skin colour for hand gestures, as well as the denaturation of hand gestures with one frame of video being cut for analysis. In this regard, the human hand is segmented from the complicated background; the real time hand gesture tracking is also realized by Camshafts algorithm. Then, the area of hand gestures which has been detected in real time is recognized by convolutional neural network to realize the recognition of 10 common digits. Experiments show 98.3% accuracy.

Dynamic and Personalized Keyboard for Eye Tracker Typing. Patients who suffer from Amyotrophic lateral sclerosis (ALS) or stroke cannot talk and express their everyday basic needs and requests. They can communicate using eye trackers since they can still use their eyes and sometimes move their heads. This study suggests new methods for improvements in both speed and ease of use for eye tracker software. The first one is letter prediction to improve the speed, and second one is a new design that

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Secure File Storage on Cloud using Hybrid Cryptography

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***Abstract* - Cloud Computing has played a vital role in the field of computing. It has revolutionized how computing is used in the industry from first setting up the infrastructure and then using it to just spinning up the resources as needed from different cloud vendors. It is also used in different industries for various services and storage of data. The data stored on the cloud can be retrieved as per the user's request but the concern of many users is the security of their data. In this proposed system 3DES (Triple Data Encryption Standard) and Blowfish algorithms are used to provide security. Here the encryption is divided into three parts. Each part is encrypted with different encryption algorithms and decrypted using the different keys when required. This system of encryption and decryption guarantees better security of data to the users by storing encrypted data on a single cloud server, using 3DES and Blowfish.**

Keywords: Blowfish, 3DES, Secure, File Storage, Cloud, Hybrid Cryptography.

1. Introduction

In Cloud computing, both files and software are not fully contained on the user's computer. File security concerns arise because both user's application and program are residing in provider premises. The cloud provider can solve this problem by encrypting the files by using encryption algorithm. Our project idea presents a file security model to provide an efficient solution for the basic problem of security in cloud environment. In this model, hybrid encryption is used where files are encrypted by blowfish coupled with file splitting and AES is used for the secured communication between users and the servers.

Cloud computing is originated from earlier large- scale distributed computing technology. NIST defines cloud computing as a model for enabling convenient on demand network access to a shared pool of configurable computing resources (like network, storage, application and services) that can be quickly provisioned and released with minimal management effort or service provider interaction. In Cloud computing files and software are not fully contained on the user's application and Program are residing in provider premises. The cloud provider can solve this problem by encryption the files by using encryption algorithm. This paper presents a file security model to provide an efficient solution for the basic problem of security in cloud environment. In this model, hybrid encryption is used where files are encrypted by file splitting and RSA is used for the secured communication between users and the servers.

2. Methodology

1) The proposed software product is liable to meet the required security needs of data center of cloud. Blowfish used for the encryption of file slices takes minimum time and has maximum throughput for encryption and decryption from other symmetric algorithms.
2) The idea of splitting and merging adds on to meet the principle of data security. The hybrid approach when deployed in cloud environment makes the remote server more secure and thus, helps the cloud providers to fetch more trust of their users.
3) Data security issues: Due to openness and multi-tenant characteristics of the cloud, the traditional security mechanisms are no longer suitable for application and data in cloud. Some of the issues are as following: Due to dynamic scalability, service and location transparency features of cloud computing model, all kinds of application and data of the cloud platform have no fixed infrastructure and security boundaries. In the event of security breach, it is difficult to isolate a particular resource that has been compromised. According to service delivery models of cloud computing, resources and cloud services may be owned by multiple providers. As there is a conflict of interest, it is difficult to deploy a unified security measure. Due to the openness of cloud and sharing virtualized resources by multitenant, user data may be accessed by other unauthorized users.
4) Hybrid Cryptosystem Scheme: Hybrid Cryptography concept is used for securing storage system of cloud. Two different approaches are used to show the difference between less secure and more secure systems. The first approach uses RSA and AES algorithms; RSA is used for key encryption and AES is used for text or data encryption. In the second or we can say more secured approach, AES and Blowfish algorithms are used. In this

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Blockchain-Based Insurance Claim for Farmers with Smart Contract

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***Abstract* - A blockchain- based insurance system for farmers could help to improve the efficiency and accuracy of insurance claims processing, as well as help to reduce fraud and corruption. The system could also help to ensure that farmers receive the full benefits to which they are entitled. Blockchain-based insurance system for farmers with smart contracts. The system is designed to provide farmers with insurance coverage against crop failure due to natural disasters. The system uses smart contracts to automatically calculate and pay out insurance claims to farmers based on data from the weather cloud app. The system will be designed to be tamper-proof and to provide a transparent and efficient way for farmers to receive insurance payments.**

Keywords: Blockchain, smart contract.

1. Introduction

Smart Contract: A smart contract is a digital contract that is stored on a blockchain. The contract is executed automatically when certain conditions are met. Smart contracts can be used to automate a variety of transactions, including financial transactions, supply chain management, and governance.

Blockchain:- A Blockchain is a distributed database that allows for secure, transparent and tamper-proof record-keeping. By design, it is resistant to modification of data. Blockchain technology has the potential to revolutionize the way we interact with the digital world. By creating a secure, decentralized platform for data storage and transaction processing, blockchain provides a new level of trust and transparency to the online economy. From a business perspective, blockchain can streamline processes, reduce costs and speed up transaction settlement times.

For individuals, blockchain can provide a new level of security and privacy for online interactions. In the simplest terms, blockchain is a digital ledger that records transactions in a secure, tamper-proof way. Each transaction is verified and recorded by a network ofcomputers, making it virtually impossible to alter or delete.This immutable, decentralized ledger can be used to track anything of value – from digital assets like cryptocurrency and loyalty points, to physical assets like property and vehicles.

The potential applications of blockchain are virtually limitless. And as more businesses and individuals begin to explore the technology, we are only just beginning to scratch the surface of its potential.

2. Problem Statement

The insurance management system is a computerized system that helps insurance companies and policyholders manage their insurance policies and claims. The system keeps track of policyholders' premiums and claims, and helps insurance companies manage their finances and operations. The system also helps policyholders understand their coverage and make informed decisions about their insurance.

3. Proposed System

Ethereum is different than what you know and use every day. Before you begin, you will need to have around Ethers to play with. Decentralized Applications (DApps) are at the core of Ethereum. They are programs that live on the network, and exist and run exactly as programmed. A DApp can have frontend code and user interfaces written in any language that can make a contract call, and they can also be hosted on decentralized storage such as IPFS.

Ethereum enables developers to build and deploy decentralized applications. A decentralized application or D-App serve some particular purpose to its users. Bitcoin, for example, is a DApp that provides its users with a peer to peer electronic cash system that enables online Bitcoin payments. Because decentralized applications are made up of code that runs on a blockchain network, they are not controlled by any individual or central entity.

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Medical Chatbot in Artificial Intelligence and Machine Learning to Help Human

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***Abstract* - A medical chatbot that leverages artificial intelligence and natural language processing provides personalized and interactive healthcare services. A medical chatbot can interact with users in a conversational manner, simulating human-like interactions through text-based or voice-based conversations. It employs advanced algorithms to analyze user input, understand their symptoms or health concerns, and provide relevant information or recommendations. The medical chatbot uses machine learning algorithms to provide personalized healthcare services. This enhances user engagement and satisfaction and improves patient empowerment. Medical chatbots have the potential to revolutionize healthcare by providing accessible and convenient services to a wide range of users, accuracy, security, and ethical concerns need to be addressed.**

Keywords: Symptoms, Diseases Conditions, Treatments/Therapies. Medications, Healthcare providers, Procedures/Test.

1. Problem Statement

Many people struggle to access timely medical advice due to limited healthcare resources or their inability to reach out to medical professionals. A medical chatbot AI can provide prompt and accurate medical advice, guidance, and support to people in need.

The chatbot is be able to answer various health-related questions, provide suggestions for self-care, and direct users to relevant medical professionals when needed.

2. Introduction

A medical chatbot AI is an artificial intelligence program designed to simulate conversation with users, with a focus on providing medical information and assistance. These chatbots can use natural language processing and machine learning techniques to understand user queries and provide personalized responses, based on a database of medical knowledge and best practices. Medical chatbot AIs can assist with a variety of tasks, such as symptom checking, medication management, appointment scheduling, and general health advice. They are a convenient and accessible resource for individuals seeking medical information and support, and can help alleviate pressure on healthcare providers by providing quick and efficient responses to common queries.

3. Libaries

NLTK (Natural Language Toolkit) – This is a popular library for natural language processing and can be used to analyze and understand the user's input in the chatbot. It can also be used for sentiment analysis and text classification, which can be useful for providing personalized responses.

Tensor flow

The Brain Team and Google worked together to develop This collection. It is an open-source high-level computing library. Moreover, it may be found in machine learning and deep learning algorithms. Tensor operations are often used in it. Researches use this python module to perform complex physics and mathematics problems. Due to its flexible design, computation may be distributed across a variety of platform (CPUs, GPUs, and TPUs), including PCs, server cluster, mobile devices, and edge devices.

Keras

In order to develop and deploy ML arrangements at a high iteration velocity, Keras offers fundamental reflections and building components. Tensor Flow's scaling and cross-platform features are widely applied.

Layers and models serve as Keras' main data structures. All of the layers in the CNN model are constructed using Keras. When the class vector is converted into a binary class matrix during data processing, it helps with the overall model's building.

SpaCy

This is another natural language processing library that can be used for tasks such as entity recognition and named entity recognition. It also has pre-trained models for tasks such as part-of-speech tagging and dependency parsing.

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Online Voting System Using Cloud Computing

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***Abstract* - In this investigation work. Voting is commonly related to politics and is finished with often taking advantage and manual approach where voters stand to vote for his or her decisions. In the new era of advanced technology where online system improve work speed, reduces mistakes and encourage the generation of accurate results, having manual election system becomes a misfortune. A public election system add up to the backbone of a democracy where the people have to elect their state's leader. India currently uses a manual election system, which source several kinds of problems. Due to this papape tally ased election system, some problems are faced by voters before or during elections and others are faced by the management before and after the voting. An online system, which involves procedures like booking voters, vote casting, vote counting, and declaring results would constitute a good solution to replace current system and put forward system in this thesis will be helpful for the voters by using any resources like their own system or arranged by executive. Moreover, the put forward stem will also decrease the risk for corruption. The system is put forward after interviewing officials of two departments, the Nation Database and Registration Authority India (NADRA) and the Election task of India (ECP). NADRA has an online archive of the citizens of India, and is providing the Computerized National Identity Cards (CNIC) and also hold up different organizations with their online system. So, by using NADRA's system it becomes easy to register all voters of the age 18 or above, and furthermore to verify and secure their data. Our system is also provide with a chat bot that works as a support or guide to the voters, this helps the using the voting process.**

Keywords: Online Voting System, Cloud Computing.

I. INTRODUCTION

In the new period of trend setting innovation where online framework supports work an incident Introducing new technology is always a complex undertaking, and has many different aspects. These aspects are partly technical, partly social, political, organization and legal, and partly behaviour. This is also the case for information and communication technologies, and we see the study of these dimensions in various disciplines. In most cases, the research then aims at bringing forward practical knowledge about design, development and implementation of ICT's, and at the same time at contributing to the theoretical knowledge of the discipline involved. As a sequel, multidisciplinary research is the characterisation of the social research related to technological change, and this paper is not different.

Of the aims our study has is to inform practical development and use of ICT's for politics, but also to learn fundamental things within the disciplines involved. Here we focus on one of the important dimensions, that is the role of social and socio-psychological factors. Experiments with Internet technology in real life situations may inform us about various things, all studied by different disciplines. However, taking the design, the development, the implementation and the use of new technologies as point of departure, all these disciplinary approaches in studying Internet voting should inform the designer.

This is what we call 'design oriented research', in which we try to produce results that inform the scholarly debates as well as the practical discourse. In the research project on which this paper is based, these many things are in fact done: first of all designing and building a prototype. Secondly, testing the automation in real situations; experimenting with the 2 prototype in order to find out one political, organizational, administrative, legal contains. And finally, experimenting with the prototype in order to learn about the acceptance, use, usability, evaluation, trust by the individual voter, and the implications for the vote.

II. LITERATURE REVIEW

Distributed computing is make use for information putting away in circulated condition and these information can be gotten to effectively from anyplace whenever. E Voting can be consideration of as Good Governance in India. Current E-Voting substructure has a few issues of including votes, fraud in making sham votes and pool of security. In any case, to settle such issues give out computing offers quantities of chances, yet the development of distributed computing advances are still at diaper days organize. In this paper, we speak to the general of distributed computing, survey of various techniques make use for cloud based E-Voting framework over the adharcard, SMS and Traditional System. The primary point of this paper is to find the difficulties

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Experimental Study and Simulation of Test Loop Flow Characteristics for Vertical Pumps

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***Abstract* - The efficiency and performance of pump involving multiple pumping units depends not only on the efficiency of the pumping units but also on the proper design of the test loop. The proper design of pump intake is not an easy task because of the various site- specific geometrical and hydraulic constraints. The time and cost involved in sump model studies for design and optimization of sump geometry can be reduced to a large extent through CFD studies. However, writing a separate code for each new product is not feasible. Hence this work is aimed at determining the feasibility of commercial CFD software as a design optimization tool for pump sumps. In the present study commercially available software ANSYS CFX has been used for CFD analysis of flow conditions in a pump sump and the results obtained are found to be in good agreement with the experimentally observed flow patterns.**

Keywords: Pump Sump, Air entering, SwirlAngle, computational fluid dynamics (CFX 15.0).

I. INTRODUCTION

The main aim of sump is to provide water with Swirl Free, air entering, uniform velocity during the pump operation, abnormal flow phenomena such as cavitation, flow separation, pressure loss, vibration and noise occur often by flow unsteadiness and instability. It is an accepted fact that faulty design of pump sump or intake is one of the major causes of unsatisfactory operation of pumps in any pumping plant. The adverse flow conditions at a pump intake lead to occurrence of air entering, swirl and vortices, which in turn reduce the pump efficiency, induce vibrations and excessive bearing loads and lead to other operating difficulties. Thus at present model studies are the only tool for developing a satisfactory design of a pump sump, additional modification such as vortex suppression devices (Cruciform), flow straightner, change the position of curtain wall. According to the HI standard or ASME criteria for a pump sump design. The objective of the present work is to close this gap by evolving a method to quantify the swirl angle, Air entering and uniform velocity

Design criteria

The efficiency and performance of pumping stations involving multiple pumping units depends not only on the efficiency of the pumping units but also on the proper design of the pump sump. The proper design of pump sump is not an easy task because of the various site-specific geometrical and hydraulic constraints. Hydraulic Pump sumps are designed to provide Air entering, surface vortices, swirl free flow to the pump. The degree of swirl is measured in physical model tests using a swirl meter and a quantity known as swirl angle is generally measured. Remove air entering when change the position of curtain wall. The present paper presents a novel method to compute the bulk swirl angle using the local velocity field obtained from computational fluid dynamics (ANSYS CFX 15.0) data. The basis for the present method is the conservation of angular momentum conservation. By carrying out both numerical and experimental studies of air entering, surface vortices,flowpattern,swirl angle calculation method is validated Further the effect of vortex suppression devices (Cruciform) in reducing the swirl angle, air entering is also demonstrated.

Geometry of Computational Model

Realistic and Suitable Boundary conditions will be applied to the ready model in the CFX. The boundary conditions depend upon 1. Single pump capacity 2. Number of working pumps.

The domain was specified as a Stationary Fluid domain with working fluid as normal water and reference pressure as 1atm. The turbulence model was selected as SST model. As boundary conditions for the steady state calculation, and isothermal process is considered. Total flow rate and null pressure-inlet condition at the inlet and at the outlet of pipe each pump operating flow rate is applied. considering the equal mass flow condition for similar pump in the suction line. Water level is kept at Defined level. As the wall conditions, free-slip condition is applied to the upper side of pump sump

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A Survey Paper on Smart Human Activity Detection Using Yolo

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***Abstract* - A simple operational model could allow one person to monitor all around us to ensure security and privacy, while maintaining cost and performance of management and getting it right. This inspection with real-time video monitoring function can be sent to hospitals or nursing homes for the sick and elderly, as well as various people working in important area such as airport. In we decided to use the YOLOv4 (You Only One See One) algorithm, which is the newest and fastest of the total algorithms for fast analysis of actions and accurate results when dealing with complex human behaviour. This method uses a bounding box to indicate the action. In these cases, we collected 4,674 different data from different hospitals or different cases, making the most accurate use of one of the largest datasets used in this type of project. When we research, we divide our actions into three different classes: standing, sitting, and walking. Model can control and analyse the activities of many patients or other normal people, and support can monitor the activities of many. After completing three projects, the model achieved an average accuracy of 94.6667.**

Keywords: YOLOv4, DarkNet, Nvidia GPU Driver.

I. INTRODUCTION

Human activity recognition is the study that includes correctly identifying activities performed by humans, tested in different ways. Human activity is the continuous flow of single or distinct action essential in progression. Some human activity specimens are a sequence of steps in which a subject enters a room, walks forward, sits down, stands up, etc. Human activity recognition can widely apply to some real-world applications like patient monitoring, surveillance of essential locations, activity-based search, etc. You can perform it at various abstract levels. Students, engineers, and students have studied human activity recognition in every part of the world for a long time. The Machine Learning-based activity recognition uses Computer vision techniques like YoloV4 and DarkNet to recognize activities performed by humans. We will mainly be focused on the various activities and detect these actions through video. The Human Actions recognized in the videos are based on analyzing a sequence of video frames using a computer to find human activities without manual operations automatically. In this paper, we will be using the YOLO (You Only Look Once) library to build a system that will detect human activities. YOLOv4 is four- time faster, and not only that, we can change between faster speed and better accuracy by just changing the amount and data for the model, without any additional retraining of data required. Human Action Recognition is an area of computer vision research and applications. The goal of Human Action Recognition is to identify and understand people's actions.

II. MOTIVATION

Understanding human activity and their interaction with surrounding objects are crucial for developing an intelligent system. Human action recognition is a field that deals with the problems generated in the integration of sensing and reasoning to provide context-aware data that can confer personalized support across an application. Several issues still plague human action recognition. Such as privacy concerns regarding continuous monitoring of activities, difficulty in performing HAR (Human activity recognition) in real-time, and lack of entirely ambient systems able to reach users at any time. Human activity recognition is a very critical monitoring system. Human action detection aims to inspect exercises from video successions or still pictures. The continuous improvement of artificial intelligence and deep learning algorithm helps us transmit and get vital physiological signs to the medical personnel and simplifies the quantification. As a result, it raises the efficiency of the patient monitoring system. A human activity recognition system can enhance the patient's experience in the medical sector.

Additionally, we can use the technology in many other fields. The active or innovative system can use HAR technology to monitor its residential area for better security. Our research aims to offer medical support, well-being services, and health benefit to older adults and other security purposes for critical infrastructure. It was exciting because we were about to create an intelligent system that would detect human activity and monitor that activity intelligently. That's why we decided to take the challenge.

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Smart Mirror Technology with Home Automation

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***Abstract* - The Internet of things (IoT) connects druggies with connection of effects to grease the life. IoT is now shifted towards 'Thing to Thing '. Smart home conception brings comfort and convenience to our lives with the aid of IoT. Technology has been bettered to live people's life most fluently. Developing an operation in such a way that the technologies reach the mortal to live a sophisticated life. Smart Mirror is one of the stylish ways to bridge the gap between the mortal and technologies. Since each person uses the Mirror in his diurnal life, the glass provides a natural means of commerce through which the residents can control the ménage smart appliances and access substantiated services. So erecting time operation fashion in glass will be useful and an effective bone. Making smart glass helps the physically challenged people much by making them up to date with modern technologies and provide ease of access to them.**

Keywords: Smart Mirror, Information System, Internet of Things, Automation, Raspberry Pi, Raspbian OS.

I. INTRODUCTION

Effective time management is one of the most import ant factors for every person's life, especially if the person is physically challenged. By increasing the integration of technology in our lives helps us to maintain an efficient schedule. Keeping the event and the social media notification up to date is made easier through technology such as PC's, smart phones etc. But using these gadgets doesn't make us to use in busy life and also provide distractions that can interrupt anyone's routine. So concept of integrating those high-tech features in mirror helps user to effectively manage their time in their daily routine.

This high-tech feature helps the physically challenged people. They cannot move from one place to another often for their every need. So voice recognition will be very helpful by the way of controlling the Home appliances. Security option will make them to be safe in home where physically challenged need no other security appliances. In an emergency case, if they need to contact any one for help, just by voice commanding. Emergency alerting system using GSM benefits the users for up-to-date notification from mirrors.

II. PROBLEM STATEMENT

The recent world has become a place of an intense competition among the people. Human race has become more goal oriented and strive to be the best in all aspects whether its sports, business or entertainment. We all, ultimately, strive to be the best. Following the news, adapting the varied weather conditions are some of the interruptions that hinder our daily progress. Activities like these consume a lot of our time and can be very distracting which might affect our day-to-day activities.

People value how they look and spend a ridiculous amount of time in front of a mirror throughout their daily routine. And this is the exact time where a lot of important things can be performed. But spending time with a smartphone and managing daily tasks, while preparing for the day would be a hard task. Therefore, a -device with certain technology is required which allows a person to efficiently complete all the work needed for them to prepare for the day. And all of this has to be done at the same time and in one place. Hence, an Artificial Intelligence based Smart Mirror.

III. PROPOSED SYSTEM

In the current existing systems, a mirror is designed that acts as a smart mirror, this mirror is made of a frame and the LED monitor is placed behind the two-way mirror. The frame is developed using wooden and nails. There is a two-way mirror in front of the wooden frame and the LED monitor is placed and the back of the wooden frame. Multiple features allow the user to save time and increase his productivity. The user sees temperature, news, clock, and time updates. Voice-controlled electrical appliance system is also implemented using Google speech API. The mobile application is also developed for controlling smart mirror when the user is not at home. Firebase fire store is used as a means of communication between the IONIC mobile application and the Raspberry Pi. The main purpose of building a mobile application is that the user can also interact with a smart mirror even he is not at home. User can control electrical appliance using the mobile application, push or delete to-do list items and can see security messages which were sent to users when raspberry pi detects any intruder. The user can also delete security messages and will be able to add new tasks.

