ANNA UNIVERSITY, CHENNAI AFFILIATED INSTITUTIONS B.E. COMPUTER SCIENCE AND ENGINEERING REGULATIONS – 2017 CHOICE BASED CREDIT SYSTEM

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

1. To enable graduates to pursue higher education and research, or have a successful career in industries associated with Computer Science and Engineering, or as entrepreneurs. To ensure that graduates will have the ability and attitude to adapt to emerging technological changes.

PROGRAM OUTCOMES POs:

Engineering Graduates will be able to:

- 1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
- 2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

- 11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- 12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OBJECTIVES (PSOs)

To analyze, design and develop computing solutions by applying foundational concepts of Computer Science and Engineering.

To apply software engineering principles and practices for developing quality software for scientific and business applications.

To adapt to emerging Information and Communication Technologies (ICT) to innovate ideas and solutions to existing/novel problems.

Mapping of POs/PSOs to PEOs

Contribution

1: Reasonable

2:Significant

3:Strong

CS8811 PROJECT WORK

OBJECTIVES:

• To develop the ability to solve a specific problem right from its identification and literature review till the successful solution of the same. To train the students in preparing project reports and to face reviews and viva voce examination.

The students in a group of 3 to 4 works on a topic approved by the head of the department under the guidance of a faculty member and prepares a comprehensive project report after completing the work to the satisfaction of the supervisor. The progress of the project is evaluated based on a minimum of three reviews. The review committee may be constituted by the Head of the Department. A project report is required at the end of the semester. The project work is evaluated based on oral presentation and the project report jointly by external and internal examiners constituted by the Head of the Department.

TOTAL: 300 PERIODS

OUTCOME:

• On Completion of the project work students will be in a position to take up anychallenging practical problems and find solution by formulating proper methodology.

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY (An Autonomous Institution- Affiliated to Anna University, Chennai) K.VELLAKULAM - 625 701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that the project report "DATA VISUALIZATION IN FOOD INSECURITY" is the bonafide work of "DESIKA NITHISH I (920418104017), MOHAMED RASITH A S M (920418104064) & VAASU G S (920418104102)" who carried out the project work under my supervision.

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INTERNAL EXAMINER

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Head of the Department,

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EXTERNAL EXAMINER

Nearly one in three people in the world did not have access to adequate food. The people in the developing countries are getting affected most. Even though the countries are taking several action to mitigate this problem, the lack of awareness among the rest of the people is being important reason for this problem. Our proposed system suggests to take the bold actions to accelerate progress by using the Data visualization to achieve the most understandable and accurate display of information. Prevalence of undernourishment dataset is directly given as input to the tableau to visualize the data. The features like geographical area name, value of prevalence of undernourishment, time period, series description are extracted and stored in csv file as a input to visualize the trend line. By applying the filters the features can be sorted. Exploratory data analysis is done in train dataset to check the distribution of data. Outliers are detected using the box plot and these are handled using the capping method. Correlation co efficient between the attributes have been checked. After analyzing the various algorithms Random forest algorithm has the good accuracy to predict the food demand. Data visualization and forecasting of food insecurity can be achieved through tableau.

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BONAFIDE CERTIFICATE

Certified that the project report "MOBILE ASSISTANCE FOR ALZHEIMER PATIENTS USING MACHINE LEARNING TECHNIQUES" is the bonafide work of KANISHA PATHY.V.B (920418104046), MUTHUMEENAKSHI.P (920418104067), MUTHU SHANKARI.C (920418104068) who

carried out the project work under my supervision.

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The aim of the project is to focus on developing mobile app for the patient with diseases which is affecting a huge amount of population today i.e., Alzheimer's and building an android application that could ease the everyday life of a person affected by Alzheimer's disease. This android application provides various functionalities such displaying the locations such as home, hospital location using GPS, providing medicine timing notifications in a daily routine to increase cognitive functioning of the patient and timely alarm for to provide a reminder of the App. The main objective of this project is to make people suffering from Alzheimer to have an independent life. This project not only creates an application, but it also addresses the problem of increased dependency of Alzheimer patients on caregivers by assisting them in a technological manner, as every person on the planet owns a mobile phone, especially if you consider India, which ranks among the top countries with the highest number of people suffering from this disease.

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BONAFIDE CERTIFICATE

Certified that the project report "CONCRETE WALL CRACK DEFECT IDENTIFICATION USING IMAGE ANALYSIS "is the bonafide work of" MOHAN M (920418104065), DINESH RAJ K (920418104023), HARISH V (920418104031)"who carried out the project work under my supervision.

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Submitted for the Viva-Voce examination held at Kamaraj College of Engineering and Technology, K.Vellakulam on ______6.05.2022_____

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INTERNAL EXAMINER

external examiner

CONCRETE WALL CRACK DEFECT IDENTIFICATION USING IMAGE ANALYSIS

PROJECT REPORT

Submitted by

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In partial fulfilment for the award of the degree

of

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IN

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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MAY 2022

Cracks on the concrete surface is one of the earliest indications of degradation of the structure which is critical for the maintenance as well the continuous exposure will lead to the severe damage to the environment. Manual inspection is the acclaimed method for the crack inspection. In the manual inspection, the sketch of the crack is prepared manually, and the conditions of the irregularities are noted. Since the manual approach completely depends on the specialist's knowledge and experience, it lacks objectivity in the quantitative analysis. So, Image-based crack detection is proposed as a replacement. The Non-Destructive crack by sub-block algorithm using pictures of crack and by finding the length and area of the crack. Depend upon the parameter estimation severity of the crack is identified and analyzed.

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VIRTUAL CONFERENCING APPLICATION

PROJECT REPORT

Submitted by

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INTERNAL EXAMINER

16.5.22

EXTERNAL EXAMINER

Video conferencing (VC) has become more popular and more reliable as a tool to bridge the distance gap when travel is not an option, impractical or undesired.Now a days having an one to one communication in physical mode difficult.Video conferencing uses audio.video and text is quite communications to bring people at different sites together. Extensive usage of these applications has resulted in data insecurity and cyber related crimes. This occurs due to data stored in multiple anonymous servers. This project mostly focused on the server-less way of communication and storage which is quite useful for small organization whose budget allocation regarding sever establishment and maintenance is very minimum. This server-less connection is achieved through (P2P) networking concept. Thus the threat regarding data insecurity will be eliminated with the additional benefit of cost reduction. This could be the alternative for the existing server-oriented conferencing applications.

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Certified that the project report "OPTIMIZING THE SCALING METHODS IN CLOUD ENVIRONMENT" is the bonafide work of "K.SARANYA (920418104088) P.SIVA SANKARI (920418104092) & P.VIDHYA(920418104106)" who carried out

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EXTERNAL EXAMINE

In current IT world automation and cloud are inevitable, More than a on-prem server cloud vendors like AWS /Azure/GCP are more flexible and pay as go manner. The different types of computing-intensive services are there and it often deployed on the cloud since it offers a convenient on-demand model for renting resources and easy-to-use the infrastructures. Cloud computing is a preferable technology to strengthen increase computational capacity and dynamically. On-demand access to a large amount of computing resources provided by Cloud makes it ideal for executing large-scale optimizations using evolutionary algorithms without the need for owning any computing infrastructure. Scalability, elasticity, and efficiency are interrelated aspects of cloud-based software services' performance requirements. In this work, we use a technical measurement of the scalability of cloud-based software services. To increase workload size within existing infrastructure hardware, software, etc. without impacting performance. Scalability can either be vertical scale-up with in a system or horizontal scale-out multiple systems in most cases but not always linearly. Therefore, applications have the room to scale up or scale out to prevent a lack of resources from hindering performance. AWS Amplify was used to claim that its scalability factor makes fullstack development much more comfortable. It offers the User Interface elements for cloud-connected workflows, CLI toolchain and code libraries. AWS S3 provides integration from the largest community of third-party solutions, system integrator partner and other AWS services. Kubernetes usually is more expensive than AWS and it requires at least two servers. AWS reduce hosting costs and management.

Index Terms-AWS Amplify, NPM (Node Package Module), Node, Git hub, React js, DynamoDB

STUDENT INFORMATION RETRIEVAL SYSTEM USING DATA MINING

PROJECT REPORT

Submitted by

JANANI K (920418104038)

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In partial fulfillment for the award of the degree of

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INTERNAL EXAMINER

16.5.22 EXTERNAL EXAMI

Predicting Student performance is an important duty in university and college since it allows them to recommend careers or further studies based on psychometric, verbal, and technical scores. Higher education, government jobs, and private jobs are all factors that are influenced by student's performance. The faculty should be informed about the student's performance in advance, which will reduce dropouts and improve the student's overall performance. In this project, machine learning classification algorithms such as decision trees and random forests were implemented to predict the student's performance. The performance of an algorithm has been evaluated based on accuracy. This project also looks into the possibility of using display and classification approaches to uncover critical markers in a small dataset that may be used to build a prediction model. To obtain the most accurate model, many machine learning approaches were developed to assess the best indications. The study's main findings demonstrated the effectiveness of analysis algorithms in training small datasets and delivering acceptable classification accuracy and reliability test rates. In this project, using decision tree 86.24% accuracy was obtained and using random forest, 88.72% accuracy was obtained.

ATTENDANCE SYSTEM AUTOMATION USING MACHINE LEARNING

PROJECT REPORT

Submitted by

RAJAVEL.S (920418104081)

KAUSHIK.G.J (920418104052)

AARTHRESH.T (920418104002)

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5 16.5.22

EXTERNAL EXAMINE

Smartphone based face attendance systems are the need in today's digital world and age for universities and schools. Smartphones with good cameras make such systems really affordable and practical as far as implementation is concerned. Automatic attendance systems make this daily practice of marking attendance easy and highly efficient. And it helps to reduce the time wasted during lectures. Face recognition-based attendance systems are one such biometric based attendance systems which are more secure and can evade multiple fake or proxy attendance practices easily. By using a face recognition-based attendance system, an attendance sheet can be generated from the group photo. It uses a transfer learning-based face recognition technique to recognize the faces of the students. An android app is developed which can be easily be utilized by any university or school without requiring any expensive infrastructure setup. The base model (MobileNetV2) used in this proposed system is well performant in the mobile phones.

LOG MAINTENANCE USING FACE RECOGNITION A PROJECT REPORT

Submitted by

NANDHAKUMAR J (920418104069)

JOTHI PRAVIN J G (920418104045)

PANDIYARAJAN R (920418104074)

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INTERNAL EXAMINER

EXTERNAL EXAMINER 22

ACKNOWLEDGEMENT

First of all, we thank the Lord Almighty and our parents for the abundant grace and countless blessings in making this work a great success.

Our heartfelt gratitude to our honourable Principal, Dr.S.SENTHIL M.E., Ph.D., and our respected Head of the Department of Computer Science and Engineering Dr.A.MEENAKSHI, M.E., Ph.D., for giving us the opportunity to showcase our professional skills through this project.

We would like to express our sincere gratefulness to our guide, Mr.B.Muthukrishna Vinayagam, M.E., Assistant professor, Department of Computer Science and Engineering, whose valuable guidance and constant supervision has been the one that helped us to complete this project.

We would like to extend our thanks to all the other faculty members and technicians of Department of Computer Science and Engineering for their support throughout this project. Our final appreciation goes to our friends who encouraged and helped us to complete this project.

IDENTIFICATION OF PHISHING WEBSITES USING MACHINE LEARNING ALGORITHMS

PROJECT REPORT

Submitted by

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Certified that the project report "IDENTIFICATION OF PHISHING

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INTERNAL EXAMINER

EXTERNAL EXAMI

Phishing is a type of internet attack where an attacker sends a fraudulent message designed to trick a person into revealing sensitive information to the attacker. In order to successfully fool a human user, the websites are designed to look like legitimate ones. The victim of these scams incurs a monetary loss, loss of private information and loss of reputation.

Phishing websites can be identified based on different machine learning algorithms. The main objective of our project is to find the phishing website based on URL and improve the efficiency of identifying the phishing website. The input for our project is URL and the machine learning algorithm detects whether it is fake or not. The decision tree, support vector machine (SVM), random forest and K-Nearest Neighbour (KNN) are the classifiers used in our project. The classifiers were tested with Phishtank dataset containing real world URLs where each could be categorized as a legitimate site or a phishing site.

Initially the Phishtank dataset is categorically encoded as 0, 1 or -1 since machine learning algorithms only accept numerical variables. After that only required features are extracted using feature selection algorithm. These extracted features are also known as contributing attributes which contribute most to the prediction. Then, different machine learning algorithms are applied to identify whether a website is fake or not. The experiment results are compared with the other works and our work performs better than existing relevant work.

BITCOIN PRICE PREDICTION USING MACHINE LEARNING

PROJECT REPORT

Submitted by

AKASHRAJA D (920418104007) KARTHICK K (920418104047) MATHAN S (920418104061)

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INTERNAL EXAMINER

EXTERNAL EXAMINER TG-5.22

This project is implemented to predict the Bitcoin price accurately taking into consideration various parameters that affects the Bitcoin value. Bitcoins are put away in an advanced wallet which is essentially similar to a virtual financial balance. it is important to anticipate the estimation of Bitcoin so right venture choices can be made. The cost of Bitcoin doesn't rely upon the business occasions or mediating government not at all like securities exchange. Most measurable procedures pursue the worldview of deciding a specific probabilistic model that best portrays watched information among a class of related models. Likewise, most AI systems are intended to discover models that best fit information. By gathering information from different reference papers and applying in real time. Each and every project has its own set of methodologies of bitcoin price prediction. Machine learning models can likely give us the insight we need to learn about the future of Crypto currency. It will not tell us the future but it might tell us the general trend and direction to expect the prices to move. we attempt to predict the Bitcoin price accurately taking into consideration various parameters that affect the Bitcoin value. For the first phase of our survey, we aim to understand and identify daily trends in the Bitcoin market while gaining insight into optimal features surrounding Bitcoin price. For the second phase of our survey, using the available information, we will predict the sign of the daily price change with highest possible accuracy instead we utilize it for predicting real-valued quantity, the price of Bitcoin. Based on this price prediction method, we devise a simple strategy for trading Bitcoin

HOST BASED INTRUSION DETECTION SYSTEM USING MACHINE LEARNING AND SECURITY INFORMATION & EVENT MANAGEMENT TOOL

PROJECT REPORT Submitted by AMRITA S (920418104008)

In partial fulfillment for the award of the degree of

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INTERNAL EXAMINER

EXTERNAL EXAMINER

The project aim is to identify threats and malicious activity in a system. i.e., there are many anomalies affecting the host that go unnoticed, so by using host-based intrusion detection, the threats in the host are detected with high accuracy. The HIDS provides various functionalities like displaying the IP address, source and destination, and accuracy of the attacks by using the NSL KDD for training the HIDS. In this project, the raw network traffic is collected by using any TCP dump tool, then the collected raw data is processed. The processed data is analyzed by the HIDS using the dataset to separate the normal and attacked packets. This project is not only about detecting the attacks but also about understanding the tools like the Security Information and Event Management tools that are used in this project for capturing the data. This project can be implemented in many places that widely use systems by identifying the threats and alerts the user.

HYBRID RECOMMENDATION SYSTEM FOR THE MOVIES USING SENTIMENT ANALYSIS FROM MICROBLOGGING DATA

PROJECT REPORT Submitted by

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In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING





DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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INTERNAL EXAMINER

K-HURDER EXTERNAL EXAMINER

Sentiment analysis is a technique which is used to computationally identifying and categorizing people's opinions expressed in the form of reviews or survey is positive, negative, or neutral. Sentiment analysis has been used in many libraries to calculate the polarity and subjectivity of the review sentences. Most online video-streaming services provide personalized user experience by utilizing the user's historical data, such as previously viewed or rated history. Movie (Recommendation System) RSs help us to quickly search preferred movies over online. The research is primarily focused on analyzing the user-generated textual reviews and categorized the user reviews into positive or negative classes. In recent years, online reviews also include some common words that help in finding the opinion of users more accurately. This system uses Collaborative Filtering, Content based filtering and user's sentimental tweets then analysis the data and provide recommendations.
SALES FORECASTING OF HORTICULTURAL PRODUCTS USING MACHINE LEARNING

PROJECT REPORT

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INTERNAL EXAMINER

S. 16.5.22. EXTERNAL EXAMINE

The sale of agricultural products is an important component of the product supply chain. The price of agricultural products, a social signal of product supply and demand, is affected by many factors, such as climate, price, policy, and so on. Due to the asymmetry between production and marketing information, the price of many agricultural products fluctuates greatly. Horticultural products are especially sensitive to price since they are not suitable for long-term storage. Therefore, forecasting the price of horticultural products is very helpful in designing a cropping plan.

Sales Forecasting is the process of estimating the future revenue by predicting the amount of product or service a market or company will sell by the upcoming days, months, year. This study is aimed at developing a forecasting model that forecasts the sales of horticultural products of an agricultural farm so that the farmers could take timely decision in increasing or decreasing the production and also helps to meet the demands of the people and also reduces the wastage thereby profits the farmers. Here we the corn sales dataset that contains sales volumes and price from 2015-2021 is used to forecast the future sales values of corn using ARIMA model. The experimental results show accuracy metrics such as Mean Square Error and Root Mean Square Error. The main objective is to show the price and quantity variation of the crops that helps to forecast the sales of the crops.

NETWORK INTRUSION DETECTION USING MACHINE LEARNING TECHNIQUES

PROJECT REPORT Submitted by UBESH KARTHICK S (920418104101)

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INTERNAL EXAMINER

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C.L EXTERNAL EXAMI

Scanned with CamScanner

Network traffic analysis and monitoring is a process that is used to keep an eye on all incoming and outgoing traffic, network activity, and availability which is also called as Packet Sniffing. It is used to detect anomalies, identifying operational issues, comparing real-time networks with historical data to identify potential threats and issues. In this project, the data packets that are sent across the network are analyzed. After analyzing the packets, a report is created to give an insight; counter measures are provided, if there is an anomaly. The incoming data packets in a network that are monitored and captured are then classified into normal or abnormal. The packets are captured using TCP dump tools; this is greatly helpful to detect malicious activity in a network.

FILTERING SPAM EMAILS USING MACHINE LEARNING TECHNIQUES

PROJECT REPORT

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EXTERNAL EXAMINE

Nowadays, Email is a part of millions of people's life. They use email for different purposes such as; business, study and for other reasons. It has changed the way man collaborates and works by being the cheapest, popular and fastest means of communication. It is a common amount for a user to receive hundreds of emails daily. Around 92% of these emails are spam. There are many cases of email abuse that have the potential to harm others. This email abuse is commonly known as spam, which contains advertisements, phishing scams, and even malware. This study purpose to know the classification of email spam with ham using different machine learning algorithms. With the increased quality of online social platforms, spammershave come up with various techniques. Then, we have to implement the NLP techniques and different machine learning techniques to classify the email into spam and ham and also predict performance of the both algorithms.

ANDROID MALWARE DETECTION USING DEEP LEARNING TECHNIQUES

PROJECT REPORT

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EXTERNAL EXAMIN

The popularity of the Android platform in smartphones and other Internet-of- Things devices has resulted in the explosive of malware attacks against it. To fightagainst the explosive growth of Android malware, we propose a static malware detection framework, known as SEDMDroid. Malware presents a serious threat to the security of devices and the services they provided, e.g. stealing the privacy sensitive data stored in mobile devices. The main aim of the study is to explore themalware prediction in android. Data pre-processing and model selection is the firsttwo faces. In model selection that, the data is divided into two portions, train set and test set, in a ratio of 80% and 20%, respectively. In classification the most prominent prediction models like, deep learning algorithms are implemented, such as Convolutional Neural Network and Artificial Neural Network algorithms are used to evaluate how they impacted model accuracy. Finally, the predicted result in the form of AUC was used to analyse the findings obtained on the test set.

SECURITY AND PRIVACY PRESERVING IN FOG CLOUD COMPUTING PROJECT REPORT

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INTERNAL EXAMINER

The storage service is excellent unless users outsource their sensitive data to cloud storage server. Cloud server gets full access and control over user's data once data is outsourced to the cloud. It can read or search through the user's data. Recently, fog server based three-layer architecture has been presented for secure storage. In that architecture, the portion of data to be stored in cloud, fog and user's local machine. Some portion of data in the cloud and their customized hash algorithm, take extra computation/storage overhead.

In this project, we create fog-based cloud storage scheme. In that scheme, data is splitted into multiple blocks through xor-combination and combine this blocks into 2-blocks or 3-blocks using xor-operation. So using this scheme, we enhance the efficiency of fog based cloud storage service and improve the security of fog server for a robust fog centric cloud computing infrastructure and we enhance crypto system to secure data without revealing any information from it.

CYBERBULLYING DETECTION IN SOCIAL MEDIA USING MACHINE LEARNING TECHNIQUES

A PROJECT REPORT

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INTERNAL EXAMINER

EXTERNAL EXAMI

From the day internet came into existence, the era of social networking sprouted. In the beginning, no one may have thought internet would be a host of numerous amazing services like the social networking. Today we can say that online applications and social networking websites have become a non-separable part of one's life. Many people from diverse age groups spend hours daily on such websites. Despite the fact that people are emotionally connected together through social media, these facilities bring along big threats with them such as cyber-attacks, which includes cyberbullying. As social networking sites are increasing, cyber bullying is increasing day by day. To identify word similarities in the tweets made by bullies and make use of machine learning and can develop an ML model automatically detect social media bullying actions. However, many social media bullying detection techniques have been implemented, but many of them were textual based. Under this background and motivation, it can help to prevent the happen of cyberbullying if we can develop relevant techniques to discover cyberbullying in social media. A Machine Learning model such as Decision tress and Naive Bayes is proposed to detect and prevent bullying on Twitter.

FAKE PROFILES DETECTION ON SOCIAL MEDIA USING MACHINE LEARNING

PROJECT REPORT

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- F- 1615 /2002 INTERNAL EXAMINER

S. 2 - 76-5-22 EXTERNAL EXAM

The majority of people now use social networking sites as part of their everyday lives. Every day, a vast number of people build profiles on social networking sites and connect with others, regardless of their place or time. False identities play an important role in advanced persisted threats and are also involved in other malicious activities. Users of social networking sites not only profit from them, but they also face security concerns about their personal details. To assess who is promoting threats in social networks, we must first identify the users' social network profiles. It is necessary to differentiate between genuine and fake accounts on social media based on the details. Detecting fake accounts on social mediahas historically focused on a number of classification methods. However, it is possible to boost the accuracy of fake profile identification in social media. Machine learning technology is used in the proposed work to increase the percentage of fake profile prediction. In feature selection model chi-square algorithm is applied to choose best data. In classification method the various machine learning algorithms are implemented, the best algorithm is Random Forest algorithm. The classification result is based on accuracy, precision, recall, f1-score, sensitivity and specificity.

iii



SIGN LANGUAGE RECOGNITION USING CNN

PROJECT REPORT

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INTERNAL EXAMINER

EXTERNAL EXAM

Used by nearly 3 million hearing-impaired people, Indian Sign Language (ISL) is being the most predominant sign language in the Southern Asia Subcontinent. The proposed work aims towards developing ISL Recognition System using Convolutional Neural Network (CNN). This work builds the bridge between hearing-impaired and hearing-majority masses for developing communication that doesn't require any learning practice from either side. The CNN algorithm is used for the classification of static sign image data. Hybrid SIFT preprocessing method has been implemented by combining SIFT and adaptive thresholding for better image processing results. The recognition system is developed and tested by using Keras module. The proposed model achieved nearly 90% of accuracy with CNN implementation which is better compared with some of the existing system accuracy rates.

AUTOMATIC PESTICIDE SUGGESTION

USING DEEP LEARNING

PROJECT REPORT

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INTERNÁL EXAMINER

EXTERNAL EXAM

Diseases caused by fungus are developed through soil-borne, above-ground infections and in some instances are transmitted through pest and insect feeding. However, the existing research lacks an accurate and fast detector of leaf diseases for ensuring the healthy development of the agricultural industry. This project is for developing an appropriate and effective method for diagnosis of the disease and its symptoms. This paper proposes a deep learning approach that is based on Multilayer Deep convolutional neural networks (CNNs) for the real-time detection of leaf diseases. The proposed approach is based on deep learning which can automatically identify the features of the diseased leaf images. It also detects the types of leaf diseases with high accuracy. In addition, the proposed approach can handle all the diseased leaf images that were captured under real conditions in the field environment. In the proposed work, convolutional neural network (CNN) is used to analyze the leaf images and to understand symptoms.

PREDICTION OF CO2 EMISSION PARAMETERS FOR SMART STEEL INDUSTRY USING MACHINE LEARNING ALGORITHMS

PROJECT REPORT

Submitted by

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INTERNAL EXAMINER

Currently the steel industry is one among the biggest producers of carbon dioxide. Energy consumption during steel production produces CO2 in large amounts. This energy consumption may depend on various parameters such as electrical energy and burning coal. An increase in the amount of carbon dioxide creates an overabundance of greenhouse gases that trap additional heat. This trapped heat leads to melting ice caps and rising ocean levels, which cause flooding. So, it is necessary to reduce CO2 because it is affecting the Environment.

Machine Learning algorithm provides the best solution to identify the CO2 Emission. However the existing work only predict whether CO2 is emitted or not. The main objective of our project is to identify the parameters that affect CO2 emission in the steel industry and also identify the CO2 emission using cluster algorithm.

Initially Steel Industry energy consumption dataset is categorically encoded as 0 or 1 because machine learning algorithm only accepts numerical values. After that apply K-Means clustering algorithm to identify the CO2 Emission. Also apply regression algorithm such as Linear Regression and Random Forest on dataset to predict the attributes that contribute the CO2 emission.

REDICTING THE SEVERITY OF COVID-19 : A MACHINE LEARNING BASED APPROACH USING COMPLETE BLOOD COUNT PARAMETERS

PROJECT REPORT

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(An Autonomous Institution - Affiliated to Anna University, Chennai) K.VELLAKULAM - 625 701 (Near Virudhunagar) MAY 2022

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KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY (An Autonomous Institution- Affiliated to Anna University, Chennai) K.VELLAKULAM - 625 701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that the project report "PREDICTING THE SEVRITY OF COVID-19 : A MACHINE LEARNING BASED APPROACH USING COMPLETE BLOOD COUNT PARAMETERS" is the bonafide work of "M.JANANI (920418104039), B.MAHIMA (920418104058) & K.JEYANARMATHA (920418104042)" who carried out the project work under my supervision.

Dr. R.RAMYA, M.E., Ph.D., Supervisor, Associate Professor, Dept. of Computer Science and Engineering Kamaraj College of Engg & Tech, K.Vellakulam, Near Virudhunagar

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INTERNAL EXAMINER

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SIGNATURE Dr. A.MEENAKSHI, M.E., Ph.D., Head of the Department, Professor, Dept. of Computer Science and Engineering Kamaraj College of Engg &Tech, K.Vellakulam, Near Virudhunagar

EXTERNAL EXAMINER

The corona virus disease is an infectious disease caused by the SARS-CoV-2 virus. Most people who fall sick with COVID-19 will experience low to moderate symptoms and recover without special treatment. However, some will become seriously ill and require medical attention. An ensemble of machine learning algorithms on the basis of complete blood count (CBC) parameters were developed. The severity of covid-19 was predicted by analyzing the patients age and gender using CBC parameters. A CBC is a regular blood test taken from the covid affected patients. According to the analysis, the severity is categorized into three levels: low, moderate and high. The prediction of severity of the disease helps in allocating the clinical resources to reduce mortality and it provides a cost-effective method to predict ICU admission and, therefore, support the clinicians in ICU allocation planning.

CORONA VIRUS PREVENTION SYSTEM

PROJECT REPORT

Submitted by

DURGA SRI S (920418104024) HARSINI S (920418104034)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE & ENGINEERING





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NETTOM INTERNAL EXAMINER

EXTERNAL EXAMINER 7.15.22

The main aim of this project is to avoid man to man interaction and to prevent from the spread of covid. This is used to perform automatically and to avoid direct interaction, were no person is allowed to touch or open the door with their bare hands.This project contains five modules thev are. Rfid .Mask Detection, Temperature Checking, Dispensing Sanitizer, Door Opening. Before entering the room, RFID is used to identify a person.RFID is a tag which includes a code were the RFID scanner is used to recognize and identify a particular person, and it is displayed in the LCD screen. Camera detects the proper coverage of the mask i.e, your mask should fit properly in your face. Make sure that your mask covers both, nose and mouth. The person body temperature is detected. The normal body temperature range is typically stated as 36.5-37°C i.e., below 98.6°F. If the person body temperature is above than 98.6°F, he/she is terminated from the process. Each and every individual is being sanitized using the ultrasonic sensor. The sanitizer is provided equally and automatically by utilizing a DC motor with the particular range. If all these process is satisfied in a sequential manner, the door opens automatically without any manual interaction by using the DC motor.
ENHANCED PRIVACY SECURED CLOUD STORAGE

PROJECT REPORT Submitted by

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In partial fulfillment for the award of the degree of



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KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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Certified that the project report "ENHANCED PRIVACY SECURED CLOUD STORAGE" is the bonafide work of "AJITH KUMAR P (920418104005), KESAV AADISH P (920418104055) and LAKSHMANAPANDIAN P (920418104056)" who carried out the project work under my supervision.

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EXTERNAL EXAMINER

The new development trends including Internet of Things, smart city, enterprises digital transformation and world's digital economy are at the top of the tide. The continuous growth of data storage pressure drives the rapid development of the entire storage market on account of massive data generated. By providing data storage and management, cloud storage system becomes an indispensable part of the new era. Currently, the governments, enterprises and individual users are actively migrating their data to the cloud. Such a huge amount of data can create magnanimous wealth. However, this increases the possible risk, for instance, unauthorized access, data leakage, sensitive information disclosure and privacy disclosure. Although there are some studies on data security and privacy protection, there is still a lack of systematic surveys on the subject in cloud storage system. In this paper, we make a comprehensive review of the literatures on data security and privacy issues, data encryption technology, and applicable counter measures in cloud storage system. Specifically, we first make an overview of cloud storage, including definition, classification, architecture and applications. Secondly, we give a detailed analysis on challenges and requirements of data security and privacy protection in cloud storage system. Thirdly, data encryption technologies and protection methods are summarized. Finally, we discuss several open research topics of data security for cloud storage.

MARK PREDICTION AND ANALYSIS SYSTEM

PROJECT REPORT

Submitted by

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HARIHARAN.S (920418104028)

MOHAMED ARSAD.M (920418104062)

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Submitted for the Viva-Voce examination held at Kamaraj College of Engineering and Technology, K Vellakulam on 17-05-2.02.2

17.5.22

EXTERNAL EXAMINER

Universities today are operating in a very complex environment. The main challenge for modern universities is to deeply analyze their students' performance, to identify their uniqueness and to build a strategy for further development and future actions. Universities being in a highly competitive environment often face challenges in the Admission system. They are in a need to deeply analyze students' performance, identify their uniqueness, get aware of the specific students characteristics and support Admission decisions at the entry point of the University. An early prediction of students' performance helps the Management in retaining their success rate. A very promising tool to achieve this objective is the use of Data Mining. Data Mining processes large amounts of data to discover hidden patterns and relationships that support decision-making. They should also consider if they have all the data needed to analyze the students at the entry point of the university or they need other data to help the managers support their decisions as how to increase the students' performance. The main goal of the research is to reveal the high potential of data mining applications for university management. This research compares the potentiality of various data mining methods including linear regression (LR), ElasticNet Regression, Extra Trees, Support Vector Machine (SVM), decision trees (DTs), Random Trees, Gradient Boosted Methods and Multilayer Perceptron.

AN INTERACTIVE LEARNING PLATFORM FOR ONLINE TRANING COURSES

PROJECT REPORT

Submitted by

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INTERNAL EXAMINER

EXTERNAL EXAM

Educational institutions (schools, colleges, and universities) in India are currently based only on traditional methods of learning, that is, they follow the traditional set up of face-to-face lectures in a classroom. Although many academic units have also started blended learning, still a lot of them are stuck with old procedures. In future learning method will be mostly in online. By changing the way of online learning in our system we are creating a load free interactive learning platform. In this system we design an E-Learning system by using a semantic web and show how the semantic web resource description formats can be utilized for automatic generation of hypertext structures from distributed metadata. Learners can acquire knowledge from their house with the best learning experiences. In the session break method, we can improve our student concentration level and learning percentage up to 45%. It is primarily based on ontology-based descriptions of content, context and structure of the learning materials and thus provides flexible and personalized access to these learning materials.

V TRAIN – A VIRTUAL TEACHING HUB

PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree of

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Submitted for the Viva-Voce examination held at Kamaraj College of Engineering and Technology, K. Vellakulam on ______

K. F. 7 15/2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

The World Health Organisation has declared Covid-19 as a pandemic that posed a significant threat to humanity as a whole. The pandemic has successfully shut down several industries and businesses including educational institutes making live offline classes exceedingly impractical. Globally, it's been estimated that over a billion children are out of classroom. This led to a dramatic change in ways education is consumed across the globe. With over billion students deprived of education, came the crisis response migration to e- learning. Digital platforms have been widely embraced, with teaching and learning being carried out remotely. During this pandemic, studying has become challenge for many along with some conspiracies of privacy leaks. This application is built with the idea of making learning better. The main things focused were live classes, prerecorded/offline classes, subscriptions-based classes. This app is also integrated with an online payment gateway to get on with a preferred subscription plan.

Rainfall Prediction Using Convolutional Neural Network

PROJECT REPORT Submitted by

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HARINI PRABHA B (920418104030)

In partial fulfillment for the award of the degree of

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K. L. J. T. Maan INTERNAL EXAMINER

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0. 17.5.22 EXTERNAL EXAM

Rainfall prediction is one of the challenging tasks in weather forecasting. Accurate and timely rainfall prediction can be very helpful to take effective security measures in advance regarding: on-going construction projects, transportation activities, agricultural tasks, flight operations and flood situation, etc. Data mining techniques can effectively predict the rainfall by extracting the hidden patterns among available features of past weather data. This research contributes by providing a critical analysis and review of latest data mining techniques, used for rainfall prediction. In this proposed system a new forecasting method that uses a Convolutional Neural Network monthly rainfall for a selected location. In this proposed system the rainfall result based on the mean square error, mean absolute error and root mean square error are forecased, with train and test of the dataset based deep learning technique.

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FUZZY BASED MULTIPOINT SENSING AC CONTROLLER SYSTEM A PROJECT REPORT

Submitted by RAMAKRISHNAN R (920418104082) DILIPAN RICHI R V S (920418104022) ABISHEK B (920418104003)

In partial fulfillment for the award of the degree of BACHELOR OF ENGINEERING

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INTERNAL EXAMINER

S. M. 17.5.22. EXTERNAL EXAMINE

Nowadays Air conditioner systems are integral part of almost every institution. AC is used in many industries and most of the IT service companies because of the hot weather outside. Normally the AC will consume lot of electricity power to work and there also be some wastage in the AC because there sometimes the workers will forget to turn off the AC so there is a loss in electricity and also they won't change the temperature even it's too cold in the outside. To overcome these problems, we have proposed an integrated system for various aspects of Internet of Things (IOT) to improve normal AC efficiency by attaching the device. This device will automatically switch the AC temperature according to the surrounding humidity and Temperature. It will also use the electricity efficiently by controlling the AC by detecting Humans and the room temperature. It will also provide security to the house, like if any harmful gases get leaked it will detect and notify us, the concept of this system is to reduce the consumption of the electricity by controlling the AC according to the room temperature, It will auto turn and off AC system by detecting Humans, It will check the Air quality and smoke. If someone enters the room the IR sensors will detect them and it will turn on the AC if the humans left the room automatically and also it will set it's temperature according to the user need.

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Certified that the project report "NSE STOCK PRICE PREDICTION USING DEEP LEARNING "is the bonafide work of "RUDOLF SAM T(920418104085), SANJAY K(920418104087), KARTHIK KUMAR J (920418104049)" who carried out the project work under my supervision.

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INTERNAL EXAMINER

EXTERNAL EXAMINER T. S.

Prediction and analysis of stock market data have got an important role in today's economy and business ideas.Predicting the future price of stocks can be possible by using LSTM(Long Short-Term Memory) network, an recurrent neural network . Here the dataset of NSE(National Stock Exchange) stock has been used to train the module.Here we use day-wise closing price data of NSE stocks. The network was trained with the stock price of a five different companies from NSE .The system achieves overall high accuracy for stock market trend prediction. With the detailed design and evaluation of prediction term lengths, feature engineering, and data pre-processing methods, this work contributes to the stock analysis research community both in the financial and technical domains.LSTM tackled the problem of long-term dependencies of RNN(Recurrent Neural Network) in which the RNN cannot predict the word stored in the long-term memory but can give more accurate predictions from the recent information.

VIDEO SUMMARIZATION

PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree of

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INTERNAL EXAMINER

17:5.22 EXTERNAL EXAMI

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Video summarization plays an important role in many fields (Education, Sports, Cooking, News). It helps in efficient storage, quick browsing, and retrieval of large collection of video data without losing important aspects. There are more than 500 hours of videos uploaded per minute to YouTube. It is awfully time-consuming to browse these videos. The video summarization is a sequence-to-sequence learning technique, where the input is the original video frame sequence and the output is the keyframe/key shot sequence. To this end, we propose a novel video summarization framework named attentive encoderdecoder networks for video summarization (AVS). It includes an encoder-decoder model and a keyshot selection model. The encoder first reads the sequence of frames and then the attention based decoder generates a sequence of importance scores. Finally, the keyshot selection model generates the keyshots based on the visual sequence and the output of the decoder. AVS framework is used for the keyshots selection module. Experiments are conducted on two video summarization datasets, i.e., SumMe and TVSum.

CAMPUS PLACEMENT PREDICTION USING MACHINE LEARNING

PROJECT REPORT

Submitted by

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INTERNAL EXAMINER

17.5.27 EXTERNAL EXAMIN

A placement predictor is to be designed to predict the possibility of a student being placed in a company. The placement predictor takes many parameters which can be used to assess the skill level of the student. While some parameters are taken from the college level, others are obtained from tests conducted in the placement management system itself. Combining these data points, the predictor is to accurately predict the total number of student being placed in a company. Data from past students are used for training the predictor. But the problem was to find a suitable classification algorithm that could do the job with maximum accuracy for our data set. Different algorithms have different accuracy depending on the type of problem it has to solve and the data set it has to work with. So, we decided to select three algorithms, namely SVM Linear Kernel, Logistic Regression and Naïve Bayes and to compare the accuracy levels of each of these algorithms, with respect to our problem and data set. The result of this test would help us in determining which algorithm to use while implementing our predictor in the placement management system.

AN EFFECTIVE NLP APPROACH FOR PROOF OF TRUTH ON SOCIAL NETWORKS

PROJECT REPORT Submitted by

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SHANMUGA PRIYA G.A(920418104090)

VIJAYALAKSHMI G(920418104107)

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MAY 2022

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EXTERNAL EXAMINER

Social media networks are one of the important parts of human life based on recent technologies and developments in the computer science area. This environment has become a famous platform for sharing information and news on any topics and daily reports, which is the main era for collecting data and data transmission. There are various advantages of this environment, but in another point of view there is lots of fake news and information that misleads the reader and user for the information needed. Lack of trust-able information and real news of social media information is one of the huge problems of this system. To overcome this problem, we have proposed an integrated system for various aspects of natural language processing (NLP) to detect fake news and better predict fake user accounts and posts. To improve this platform in terms of security, which provides the outline of digital contents authority proof. More specifically, the concept of this system is developing a secure platform to predict and identify fake news in social media networks.

10T BASED WOMEN SAFETY DEVICE BY USING GPS MODULE

PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING





DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY (An Autonomous Institution-Affiliated to Anna University, Chennai) K. VELLAKULAM - 625 701 (Near Virudhunagar)

MAY 2022

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Certified that the project report "IoT BASED WOMEN SAFETY DEVICE BY USING GPS MODULE" is the bonafide work of DHANUSHIYA S (920418104020) & SRUTHI M(920418104094) & SUNDARESHWARI M(920418104096) who carried out the project work under my supervision.

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EXTERNAL EXAMINER

According to the Indian Constitution, Women also have the right to live independent, glorious lives like men. Currently, Women all over the world are deciding their precious and self-place. On the other hand, safety for Women has become a huge problem. Women will feel insecure due to the incident happening with them like crimes, kidnapping etc. Thus, to avoid this kind of harassments, Women need to be taught selfdefense. "Women safety device" is the solution for girl security to fight against crimes like molestation, seducing, eve-teasing etc., The defense devices are to be proposed in large scale productions so that no women should consider powerless while facing such crime issues. This project primarily focuses on women safety system by track the women location lively. The "Women safety device" aims at providing security by embedding in to an Arduino based module. Live location can be tracked with the help of longitude and latitude by using a cloud. Through GPS, further messages are sent to the registered email id such as family or friends and also it will send the information through SMS. It alarms with a help of buzzer for surrounding people may be help to rescue the women.

IOT BASED EMERGENCY AND THEFT VEHICLE IDENTIFICATION SYSTEM USING RFID

PROJECT REPORT

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J. ______. EXTERNAL EXAMINER 17.5.22

In today's world, traffic jams during rush hours is one of the major concerns. During rush hours, emergency vehicles like ambulances get stuck in jams. Due to this, these emergency vehicles are not able to reach their destinations in time, resulting into a loss of human lives. The system which is used to provide clearance to any emergency vehicle by turning all the red lights to green on the path of the emergency vehicle, hence providing a complete green wave to the desired vehicle. In addition to the green wave path, the system will track a stolen vehicle when it passes through a traffic light. So, it is an autonomous 2-tier system which will help in the identification of emergency vehicles or any other desired vehicle. It is a novel system which can be used to implement the concept of the green wave. **10T BASED STREET LIGHT AUTOMATION WITH POWER** MANAGEMENT AND FAULT DETECTION SYSTEM

PROJECT REPORT

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TERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The Word Smart is an acronym for the 5 elements of specific, measurable, achievable, relevant, and time-based. IOT describes the large and growing set of digital devices as now numbering in the billions which operate across networks of potentially global scale. As the world is growing a bit faster people are being attracted to this word smart. India is one of the fastest growing economies in the world taking this as a factor we are implementing a switch to smart technique - Namely street light system. The manual streetlight system lights powered from sunset to sunrise with maximum intensity even when power is available. The Saved energy can be utilized in various purposes like residential, commercial etc. This is done by using the LDR sensor. Considering the intensity of light, we can turn a light on/off. The power supply to the system is the main supply and converting them using a Relay. Every city need to have solar powered street light system which is essential. In order to save the energy, we are using the project through an IOT module. As there is a tremendous change in the world everything is changing into automation. This is a smart control and intelligent decision making devices based on accurate real time field data.