AGRICULTURE HELPER CHATBOT

A major project report submitted in partial fulfillment of the requirements

for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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A.PRATHYUSHA	**(19S41A0503)**
A.BHANUTEJA	**(19S41A0504)**
G.ANUSHA	**(19S41A0530)**

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ABSTRACT

As India has an agro-based economy, 58% of its population relies on agriculture as its primary method of livelihood. In spite of this, the economic survey for 2019-2020 indicates that agriculture growth inIndia has stagnated around 2.9% annually for the past 6 years. Considering the number of people in India still relying on it, it is real concern. One of the prevailing issues is lack of right information. This problem can be solved by providing farmers with expert advice and relevant information. In this paper, the proposed chatbot called AgroBot is a multi-user chat application.

AgroBot can overcome this problem by allowing farmers to obtain the information they need to succeed in an ever-changing market and to enlarge with new technology and market demand in an easy- touse manner. In this project we are designing Chatbot for farmers where Chatbot ask farmer to upload crop image and then application will apply Deep Learning CNN algorithm to predict disease from that crop leaf and display possible remedies. After getting remedies user can ask question related to crop such as cropname and then Chatbot will display soil, rainfall and other details.

CHAPTER 8
CONCLUSION

A large and open problem in an economy such as India that is dominated by agriculture is to build scalable, reliable, real-time, 24/7 responsive applications. An application called AgroBot proposed in this paper, which combines NLP and machine learning, provides natural language answers to farming-related questions in a multiuser chat environment. Utilizing natural language technology, our chatbot can impact uneducated people by offering information related to agriculture and horticulture.

By using the messaging app, farmers will have access to agricultural information and localized information such as market prices and weather forecasts for their area.

DETECTION AND CLASSIFICATION OF FRUIT DISEASES USING IMAGE PROCESSING

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

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ABSTRACT

Agriculture has been the base for every people. It is most important that more than 70%of people depend on agriculture for their livelihood in India. Nowadays the growth of productivity of plants, crops and fruits are normally effected by the diseases.

Fruit disease detection is vital at early stage since it will affect the agricultural field. In this paper, mainly consider the detection and analysis of fruit infections which is available in the plant areas and storage of data about the agricultural filed and details of farmers in database and recovering the data using Cloud computing. There are more fruit diseases which occur due to the surrounding conditions, mineral levels, insectsin the farm area and other factors. The detected data from the plant area is determined by image processing and stored in the database

CHAPTER 8

CONCLUSION

The development of cloud based scheme for helping Indian farmers and agriculture, helps to analyze the agriculture data in a better way to reduce the hoardings and in bringing up a prosperous safe and peaceful farmer society in India. The classification and segmentation of fruit images were performed using K-Means Algorithm and SVM technique. The various features of few fruits were initially extracted and segment the respective images. After comparison with feature values, the various disease names are analyzed and the optimal disease for the image is identified and the disease is indicated by an alert box and can be provided as the message through mobile application. The total number of samples provided, the true and false positions, the true and false negativities, the accuracy and the specificity are also indicated in an alert box.

SESPHR: A METHODOLOGY FOR SECURE SH[illegible]
OF PERSONAL HEALTH RECORDS IN THE CL[illegible]

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This is to certify that the project report entitled **"SESPHR: A METHODOLOGY FOR SECURE SHARING OF PERSONAL HEALTH RECORDS IN THE CLOUD"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE, and is a bonafide record of the work performed by

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ABSTRACT

The increased adoption of cloud-based services in the healthcare sector has led in the cost-effective and convenient exchange of Personal Health Records (PHRs) among many e-Health system participants. Nonetheless, keeping personal health information on cloud servers exposes it to disclosure or theft, necessitating the development of procedures that safeguard the privacy of PHRs.

As a result, we offer SeSPHR, a methodology for safe PHR sharing in the cloud. The SeSPHR approach ensures patient-centric control over PHRs while maintaining PHR confidentiality. Patients store encrypted PHRs on untrusted cloud servers and provide access to different sorts of users on different portions of the PHRs selectively. Setup is a semi-trusted proxy.

CONCLUSION AND FEATURE ENHANCEMET

We proposed a methodology to securely store and transmission of the PHRs to the authorized entities in the cloud. The methodology preserves the confidentiality of the PHRs and enforces a patient-centric access control to different portions of the PHRs based on the access provided by the patients. We implemented a fine-grained access control method in such a way that even the valid system users cannot access those portions of the PHR for which they are not authorized. The PHR owners store the encrypted data on the cloud and only the authorized users possessing valid re-encryption keys issued by a semi trusted proxy are able to decrypt the PHRs.

The role of the semi-trusted proxy is to generate and store the public/private key pairs for the users in the system. In addition to preserving the confidentiality and ensuring patient-centric access control over the PHRs, the methodology also administers the forward and backward access control for departing and the newly joining users, respectively. Moreover, we formally analyzed and verified the working of SeSPHR methodology through the HLPN, SMT-Lib, and the Z3 solver. The performance evaluation was done on the on the basis of time consumed to generate keys, encryption and decryption operations, and turnaround time. The experimental results exhibit the viability of the SeSPHR methodology to securely share the PHRs in the cloud environment.

DIGITAL RESTAURANT

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

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This is to certify that the major project report entitled **"DIGITAL RESTAURANT"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE, and is a bonafide record of the work performed by.

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ABSTRACT

Suppose if we go to the restaurant there is lot of manual process is there first the waiter will come to our bench and he will give the menu and we need to read that menu and order the things but here there is a problem what ever the items are available in the menu all items are not ready in the restaurant so that menu is not updated. if we use this application we will provide a one qr code to customers if they scan that qr code they can able to see the menu and also restaurant owner can update the menu daily with prices.

8. CONCLUSION

In conclusion, a digital restaurant Android application system offers a range of features and functionalities aimed at improving the overall dining experience for customers. It enables users to register and login, browse menus, place online orders, make table reservations, and track order statuses. The integration with online payment gateways ensures secure and convenient transactions. Loyalty and rewards programs incentivize customer retention, while reviews and ratings provide valuable feedback for both customers and restaurant owners. The system also incorporates customer support channels and options for personalized recommendations. Overall, a well-designed digital restaurant Android application system can enhance efficiency, customer satisfaction, and business growth in the restaurant industry.

DETECTION OF CARDIOVASCULAR DISEASES IN ECG IMAGES USING DEEP LEARNING METHODS

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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ABSTRACT

Cardiovascular diseases (heart diseases) are the leading cause of death worldwide. The earlier they can be predicted and classified; the more lives can be saved. Electrocardiogram (ECG) is a common, inexpensive, and noninvasive tool for measuring the electrical activity of the heart and is used to detect cardiovascular disease. In this article, the power of deep learning techniques was used to predict the four major cardiac abnormalities: abnormal heartbeat, myocardial infarction, history of myocardial infarction, and normal person classes using the public ECG images dataset of cardiac patients. First, the transfer learning approach was investigated using the low-scale pretrained deep neural networks SqueezeNet and AlexNet. Second, a new convolutional neural network (CNN) architecture was proposed for cardiac abnormality prediction. Third, the aforementioned pretrained models and our proposed CNN model were used as feature extraction tools . According to the experimental results, the performance metrics of the proposed CNN model outperform the exiting works, it achieves better accuracy.

CHAPTER 7

CONCLUSION

In this article, we propose a lightweight CNN-based model to classify the four major cardiac abnormalities using public ECG images dataset of cardiac patients. According to the results of the experiments, the proposed CNN model achieves remarkable results in cardiovascular disease classification and can also be used as a feature extraction tool for the traditional machine learning classifiers. Thus, the proposed CNN model can be used as an assistance tool for clinicians in the medical field to detect cardiac diseases from ECG images and bypass the manual process that leads to inaccurate and time-consuming results.

In the future work, optimization techniques can be used to obtain optimized values for the hyperparameters of the proposed CNN model. The proposed model can also be used for predicting other types of problems. Since, the proposed model belongs to the family of low-scale deep learning methods in terms of the number of layers, parameters, and depth. Therefore, a study on using the proposed model in the Industrial Internet of Things domain for classification purposes can be explored.

BRAIN TUMOUR IMAGE SEGMENTATION USING DEEP LEARNING

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

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in

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ABSTRACT

Automated segmentation of brain tumor from multimodal MR images ispivotal for the analysis and monitoring of disease progression. As gliomas aremalignant and heterogeneous, efficient and accurate segmentation techniques are usedfor the successful delineation oftumors into intra-tumoral classes. Deep learningalgorithms outperform on tasks of semantic segmentation as opposed to the moreconventional, context-based computer vision approaches. Extensively used forbiomedical image segmentation, Convolutional Neural Networks have significantlyimproved the state-of-the-art accuracy on the task of brain tumor segmentation.In this paper, we propose an ensemble of two segmentation networks: a 3DCNN and a U-Net, in a significant yet straightforward combinative technique thatresults in better and accurate predictions. Both models were trained separately on theBraTS-19 challenge dataset and evaluated to yield segmentation maps whichconsiderably differed from each other in terms of segmented tumor sub-regions andwere ensembled variably to achieve the final prediction.

CHAPTER 9
CONCLUSION & FUTURE WORK

9.1 CONCLUSION

In this project we are using Image Segmentation method. We have used a hybrid of two different techniques, i.e. Watershed and Contrast Technique. This technique is well suited for detection of tumor in the image. This segmentation method gives high accuracy as compare to other methods. MRI images are best suitable for brain tumor detection. In this study Digital Image Processing Techniques are important for brain tumor detection by MRI images. The preprocessing techniques include different methods like Filtering, Contrast enhancement, Edge detection is used for image smoothing. The preprocessed images are used for post processing operations like; threshold, histogram, segmentation and morphological, which is used to enhance the images.

9.2 FUTURE WORK

In this study Digital Image Processing Techniques are important for brain tumor detection by MRI images. The preprocessing techniques include different methods like Filtering, Contrast enhancement, Edge detection is used for image smoothing. The preprocessed images are used for post processing operations like; threshold, histogram, segmentation and morphological, which is used to enhance the images.

MISSING CHILD IDENTIFICATION USINGDEEP LEARNING AND MULTICLASS SVM FINAL

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

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ABSTRACT

In India a countless number of children are reported missing every year. Among the missing child cases a large percentage of children remain untraced.

Deep learning methodology identifies the reported missing child from the photos of multitude of children available, with the help of face recognition. The public can upload photographs of suspicious children into a common portal with landmarks and remarks. The photo will be automatically compared with the registered photos of the missing child from the repository. Classification of the input child image is performed and photo with best match will be selected from the database of missing children. For this, a deep learning model is trained to correctly identify the missing child from the missing child image database provided, using the facial image uploaded by the public.

The Convolutional Neural Network (CNN), a highly effective deep learning technique for image-based applications, is adopted here for face recognition. Face descriptors are extracted from the images using a pre-trained CNN model VGG-Face deep architecture. Compared with normal deep learning applications, our algorithm uses convolution network only as a high-level feature extractor and the child recognition is done by the trained SVM classifier.

CHAPTER-8

CONCLUSION

A missing child identification system is proposed, which combines the powerful CNN based deep learning approach for feature extraction and support vector machine classifier for classification of different child categories. This system is evaluated with the deep learning model which is trained with feature representations of children faces. By discarding thesoftmax of the VGG-Face model and extracting CNN image features to train a multi class SVM, it was possible to achieve superior performance. Performance of the proposed system is tested using the photographs of children with different lighting conditions, noises and also images at different ages of children. The classification achieved a higher accuracy of 99.41% which shows that the proposed methodology of face recognition could be used for reliable missing children identification.

FUTURE SCOPE

In future we will use some more efficient algorithms to improve accuracy and efficiency for my application.

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EMOTION-RESPONSIVE MUSIC SUGGESTION SYSTEM

A project report submitted in partial fulfillment of the requirements for the award of the degree of

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in

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ABSTRACT

Most of the existing music recommendation systems use collaborative or content based recommendation engines. However, the music choice of a user is not only dependent to the historical preferences or music contents. But also dependent to the mood of that user. This paper proposes an emotion based music recommendation framework that learns the emotion of a user from the signals obtained via wearable physiological sensors. In particular, the emotion of a user is classified by a wearable computing device which is integrated with a galvanic skin response (GSR) and photo plethysmography (PPG) physiological sensors. This emotion information is feed to any collaborative or content based recommendation engine as a supplementary data. Thus, existing recommendation engine performances can be increased using these data. Therefore, in this paper emotion recognition problem is considered as arousal and valence prediction from multi-channel physiological signals. Experimental results are obtained on 32 subjects' GSR and PPG signal data with/out feature fusion using decision tree, random forest, support vector machine and k-nearest neighbors algorithms. The results of comprehensive experiments on real data confirm the accuracy of the proposed emotion classification system that can be integrated to any recommendation engine. Index Terms--Emotion Aware Recommendation Engine, Emotion Recognition, Galvanic Skin Response, Machine Learning, Physiological Signals, Photo Plethysmography

CHAPTER-11

CONCLUSION

In this study, a framework for enhancing music recommendation engines performance via physiological signals has been introduced. Emotion recognition from multi-channel physiological signals was performed, data fusion techniques were applied to combine data from GSR and PPG sensors and FLF has been implemented. Considering emotion state of the listener improves the performance of recommendations. Recognizing arousal and valence values directly from only GSR and PPG signals is a challenging task. We have showed that there is relationship between GSR and PPG signals and emotional arousal and valence dimensions. For GSR only signal, we have obtained 71.53% and 71.04% accuracy rate for arousal and valence prediction respectively. For photoplehysmography only signal, we have obtained 70.93% and 70.76% accuracy rate for arousal and valence prediction respectively. Fusing GSR and PPG signals we have obtained the results, 72.06% and 71.05% accuracy rate for arousal and valence prediction respectively. Although there is only slight improvement using fusion in emotion recognition accuracy, the proposed framework is promising for music recommendation engines in terms of adding multi modal emotion phenomenon into music recommendation logic. Performance can be improved with the advancement of wearable sensor technologies and using different type of sensors. Using more than one sensor may also help for failure management. As future work, we will consider different combination of sensors that handle the failures of wearable sensors and additional sensors usage to increase performance. The results of this study can be used to increase user experience of multimedia tools and music recommendation engines. Since there is high correlation between physiological GSR and PPG data and affective state and cognitive state of a person multimedia recommendation engines can benefit from physiological computing systems.

VGSE STUDENT LOGIN

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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L.PRASHANTH	(19S41A0547)
J.LAXMINIVAS REDDY	(19S41A0536)
G.KOMURAVELLY	(19S41A0531)

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ABSTRACT

An Android application designed to provide college students with access to their personal information and academic records would be a useful tool for many students. The application could be named "VGSE STUDENT LOGIN" and would require students to log in using their student ID number/E-mail and password. Once logged in, the application would provide students with access to their academic information such as course schedules, grades, and transcripts. The application could also include a news section where students can find the latest campus news and events. Overall, VGSE STUDENT LOGIN would be a valuable android application for college students, providing them with easy access to their academic and personal information, as well as a way to connect with their peers and professors.

CHAPTER 8
CONCLUSION

An Android based mobile application for College Management System is presented. The application offers reliability, time savings and easy control. It can be used as a base for creating and enhancing applications for viewing results, tracking attendance for colleges or any workplace. Students and their parents will also view attendance and curriculum details using this application. Also students can view details, notifications anywhere and anytime..

PREDICTING STOCK MARKET TRENDS USING MACHINE LEARNING AND DEEP LEARNING ALGORITHMS VIA CONTINUOUS AND BINARY DATA A COMPARATIVE ANALYSIS

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MD.AMAAN AHMED	(19S41A0557)
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ABSTRACT

The stock market is a complex and volatile system, which makes it difficult to predict future trends. In recent years, machine learning and deep learning algorithms have gained popularity for their ability to analyze large amounts of data and make predictions. This study aims to compare the effectiveness of machine learning and deep learning algorithms in predicting stock market trends using continuous and binary data. we collected historical stock market data and applied machine learning and deep learning algorithms to predict future trends. We compared the performance of two types of algorithms: Random Forest and LSTM (Long Short-Term Memory) neural network. We also used two types of data: continuous data (such as stock price, volume, and other financial indicators) and binary data (such as news sentiment analysis, economic indicators, and market news). The results show that LSTM neural network outperformed Random Forest in both continuous and binary data prediction. Moreover, binary data proved to be more effective in predicting stock market trends than continuous data.

CHAPTER 7

CONCLUSION

The purpose of this study was the prediction task of stock market movement by machine learning and deep learning algorithms. Four stock market groups, namely diversified financials, petroleum, non-metallic minerals and basic metals, from Tehran stock exchange were chosen, and the dataset was based on ten years of historical records with ten technical features. Also, nine machine learning models (Decision Tree, Random Forest, Adaboost, XGBoost, SVC, Naïve Bayes, KNN, Logistic Regression and ANN) and two deep learning methods (RNN and LSTM) were employed as predictors. We supposed two approaches for input values to models, continuous data and binary data, and we employedthree classification metrics for evaluations. Our experimental works showed that there was a significant improvement in the performance of models when they use binary data instead of continuous one. Indeed, deep learning algorithms (RNN and LSTM) were our superior models in both approaches.

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ABSTRACT

This project talks about the affect of pests on agricultural achievements. For that purpose, it introduces the deep studying approach for figuring out as properly as classifying the pests into two main categories: the unsafe pests and the beneficial. Unfortunately, most of the farmers in Bangladesh are now not adequate skilled and lack the understanding to differentiate the recommended pests from the hazardous ones and so, very regularly they make attempts to kill each kinds of pests which, in the lengthy run, reduces the manufacturing rate. So, the differentiation of really helpful pests from dangerous ones is a fundamental challenge. Scientists have been attempting to clear up this hassle and proposing many methods for the remaining few decades.

CONCLUSION

A pests-classification mannequin based totally on CNN used to be cautioned in this article. The proposed mannequin gives great amenities to the farmers to understand really useful and detrimental pests easily. To set up the mannequin pests with two special lessons have been viewed the place every type considers 10 extraordinary species. A massive quantity of pests' pics have been taken to instruct and check the system. The machine considers more than a few sorts of CNN based totally classification strategies for discovering out the excellent classifier. Table three suggests that almost all CNN strategies have been extraordinarily accurate, however the proposed one is the pleasant amongst all. Besides, the time and complexity of implementation of the proposed CNN structure are decrease than the extraction and switch models. In the future, a greater correct and sturdy mannequin will be developed for bettering the accuracy of the pests-identification system. A smartphone utility will additionally be developed in the future to realize pests and to exhibit the pest data to the farmers. The utility will make a main contribution to well timed pest detection and to defending crop injury from unsafe pesticides and poisonous pesticides for beneficial pests

Detection of Cyber Attacks in Network using Machine Learning Techniques

A major project report submitted in partial fulfillment of the requirements

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in

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by

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ABSTRACT

Contrasted with the past, improvements in PC and correspondence innovations have given broad and propelled changes. The use of new innovations give incredible advantages to people, organizations, and governments, be that as it may, messes some up against them. For instance, the protection of significant data, security of put away information stages, accessibility of information and so forth. Contingent upon these issues, digital fear-based oppression is one of the most significant issues in this day and age. Digital fear, which made a great deal of issues people and establishments, has arrived at a level that could undermine open and nation security by different gatherings, for example, criminal association, proficient people and digital activists. Along these lines, Intrusion Detection Systems (IDS) has been created to maintain a strategic distance from digital assaults.

CHAPTER-7
CONCLUSION & FUTURE SCOPE

Right now, estimations of decision tree, SVM, Random Forest and profound learning calculations dependent on modern dataset were introduced relatively. Results show that the profound learning calculation performed fundamentally preferable outcomes over We are going to utilize port sweep endeavors as well as other assault types with AI and profound learning calculations, apache Hadoop and sparkle innovations together dependent on this dataset later on. All these calculation helps us to detect the cyber attack in network. It happens in the way that when we consider long back years there may be so many attacks happened so when these attacks are recognized then the features at which values these attacks are happening will be stored in some datasets. So by using these datasets we are going to predict whether cyber attack is done or not. These predictions can be done by three algorithms this paper helps to identify which algorithm predicts the best accuracy rates which helps to predict best results to identify the cyber attacks happened or not. In enhancement we will add some ML Algorithms to increase accuracy .

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ABSTRACT

Human emotions are the mental state of feelings and are spontaneous. There is no clear connection between emotions and facial expressions and there is significant variability making facial recognition a challenging research area. Features like Histogram of Oriented Gradient (HOG) and Scale Invariant Feature Transform (SIFT) have been considered for pattern recognition. These features are extracted from images according to manual predefine algorithms. In recent years, Machine Learning (ML) and Neural Networks (NNs) have been used for emotion recognition. In this report, a Convolutional Neural Network (CNN) is used to extract features from images to detect emotions.

The Python Dlib toolkit is used to identify and extract 64 important landmarks on a face. A CNN model is trained with grayscale images from the FER 2013 dataset to classify expressions into five emotions, namely happy, sad, neutral, fear and angry. To improve the accuracy and avoid overfitting of the model, batch normalization and dropout are used. The best model parameters are determined considering the training results. The test results obtained show that CNN Model 1 is 80% accurate for four emotions (happy, sad, angry, fear) and 72% accurate for five emotions(happy, sad, angry, neutral, fear), while CNN Model 2 is 79% accurate for four emotions and 72% accurate for five emotions.

8. CONCLUSION

In this paper, we presented a Convolutional Neural Network model for students' facial expression recognition. The proposed model includes 4 convolutional layers, 4 max pooling and 2 fully connected layers. The system recognizes faces from students' input images using Haar-like detector and classifies them into seven facial expressions: surprise, fear, disgust, sad, happy, angry and neutral. The proposed model achieved an accuracy rate of 70% on FER 2013 database. Our facial expression recognition system can help the teacher to recognize students' comprehension towards his presentation.

Thus, in our future work we will focus on applying Convolutional Neural Network model.

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ABSTRACT

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SESPHR: A METHODOLOGY FOR SECURE SHARING OF PERSONAL HEALTH RECORDS IN THE CLOUD

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ABSTRACT

The increased adoption of cloud-based services in the healthcare sector has led in the cost-effective and convenient exchange of Personal Health Records (PHRs) among many e-Health system participants. Nonetheless, keeping personal health information on cloud servers exposes it to disclosure or theft, necessitating the development of procedures that safeguard the privacy of PHRs.

As a result, we offer SeSPHR, a methodology for safe PHR sharing in the cloud. The SeSPHR approach ensures patient-centric control over PHRs while maintaining PHR confidentiality. Patients store encrypted PHRs on untrusted cloud servers and provide access to different sorts of users on different portions of the PHRs selectively. Setup is a semi-trusted proxy.

CONCLUSION AND FEATURE ENHANCEMET

We proposed a methodology to securely store and transmission of the PHRs to the authorized entities in the cloud. The methodology preserves the confidentiality of the PHRs and enforces a patient-centric access control to different portions of the PHRs based on the access provided by the patients. We implemented a fine-grained access control method in such a way that even the valid system users cannot access those portions of the PHR for which they are not authorized. The PHR owners store the encrypted data on the cloud and only the authorized users possessing valid re-encryption keys issued by a semi trusted proxy are able to decrypt the PHRs.

The role of the semi-trusted proxy is to generate and store the public/private key pairs for the users in the system. In addition to preserving the confidentiality and ensuring patient-centric access control over the PHRs, the methodology also administers the forward and backward access control for departing and the newly joining users, respectively. Moreover, we formally analyzed and verified the working of SeSPHR methodology through the HLPN, SMT-Lib, and the Z3 solver. The performance evaluation was done on the on the basis of time consumed to generate keys, encryption and decryption operations, and turnaround time. The experimental results exhibit the viability of the SeSPHR methodology to securely share the PHRs in the cloud environment.

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ABSTRACT

Human emotions are the mental state of feelings and are spontaneous. There is no clear connection between emotions and facial expressions and there is significant variability making facial recognition a challenging research area. Features like Histogram of Oriented Gradient (HOG) and Scale Invariant Feature Transform (SIFT) have been considered for pattern recognition. These features are extracted from images according to manual predefine algorithms. In recent years, Machine Learning (ML) and Neural Networks (NNs) have been used for emotion recognition. In this report, a Convolutional Neural Network (CNN) is used to extract features from images to detect emotions.

The Python Dlib toolkit is used to identify and extract 64 important landmarks on a face. A CNN model is trained with grayscale images from the FER 2013 dataset to classify expressions into five emotions, namely happy, sad, neutral, fear and angry. To improve the accuracy and avoid overfitting of the model, batch normalization and dropout are used. The best model parameters are determined considering the training results. The test results obtained show that CNN Model 1 is 80% accurate for four emotions (happy, sad, angry, fear) and 72% accurate for five emotions(happy, sad, angry, neutral, fear), while CNN Model 2 is 79% accurate for four emotions and 72% accurate for five emotions.

8. CONCLUSION

In this paper, we presented a Convolutional Neural Network model for students' facial expression recognition. The proposed model includes 4 convolutional layers, 4 max pooling and 2 fully connected layers. The system recognizes faces from students' input images using Haar-like detector and classifies them into seven facial expressions: surprise, fear, disgust, sad, happy, angry and neutral. The proposed model achieved an accuracy rate of 70% on FER 2013 database. Our facial expression recognition system can help the teacher to recognize students' comprehension towards his presentation.

Thus, in our future work we will focus on applying Convolutional Neural Network model.

TITLE: EMOTION BASED MUSIC RECOMMENDATION SYSTEM USING CONVOLUTIONAL NEURAL NETWORK

A major project report submitted in partial fulfillment of the requirements

for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

TEAM MEMBERS

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ABSTRACT

We propose a new approach for playing music automatically using facial emotion. Most of the existing approaches involve playing music manually, using wearable computing devices, or classifying based on audio features. Instead, we propose to change the manual sorting and playing. We have used a Convolutional Neural Network for emotion detection. For music recommendations, Pygame & Tkinter are used. Our proposed system tends to reduce the computational time involved in obtaining the results and the overall cost of the designed system, thereby increasing the system's overall accuracy. Facial expressions are captured using an inbuilt camera. Feature extraction is performed on input face images to detect emotions such as happy, angry, sad, surprise, and neutral. Automatically music playlist is generated by identifying the current emotion of the user. Our proposed system tends to reduce the computational time involved in obtaining the results and the overall cost of the designed system thereby increasing the system's overall accuracy. It yields better performance in terms of computational time, as compared to the algorithm in the existing literature.

8. CONCLUSION & FUTURE WORK

8.1 Conclusion: -

In conclusion, the development of an emotion-based music recommendation system using Convolutional Neural Networks (CNN) holds great potential for enhancing the music listening experience. By analyzing the audio features of songs, such as pitch, rhythm, and timbre, the CNN can accurately classify songs into different emotional categories, allowing for personalized recommendations based on the user's current mood.

This technology has the potential to revolutionize the way we consume music by allowing us to discover new songs that resonate with our current emotional state. It could also help users with mental health issues, as listening to music can have a profound impact on mood regulation.

Overall, the emotion-based music recommendation system using CNN is an exciting advancement in the field of music technology, and we can expect to see more innovations in this area in the future.

8.2 Future Work: -

There are several potential future scopes for the emotion-based music recommendation system using CNN. Some of them are Integration with wearable technology: With the increasing popularity of wearable technology, such as smartwatches and fitness bands, the emotion-based music recommendation system could be integrated with such devices to provide more personalized recommendations based on the user's real-time emotional state. Integration with social media: The system could be integrated with social media platforms, such as Facebook and Twitter, to analyze users' social media activity and provide recommendations based on their emotional state.

IDENTIFICATION OF DIFFERENT PLANT LEAF DISEASES USING CONVOLUTIONAL NEURAL NETWORK

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

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ABSTRACT

The level of agricultural production is crucial to a nation's economic growth. The biggest obstacle to the production and quality of food, though, is plant disease. Early detection of plant diseases is essential for maintaining global health and welfare. The standard method of diagnosis entails a pathologist visiting the location and visually evaluating each plant. However, due to lower accuracy and limited accessibility of human resources, manual examination for various plant diseases is limited. To address these problems, it is necessary to develop automated methods that can quickly identify and classify a wide range of plant diseases. The presence of low-intensity information in the image background and foreground, the extreme color similarity between healthy and diseased plant areas, the presence of noise in the samples, and changes in the position, chrominance, structure, and size of plant leaves make it difficult to accurately identify and classify plant diseases. We have developed a reliable plant disease classification system using an InceptionV3 Architecture to address the aforementioned issues. In this project, we suggested a deep learning strategy based on InceptionV3 Architecture to identify leaf diseases in a variety of plants. Finding the plant disease and its classification is our aim. The referenced dataset is taken from the wellknown public source kaggle.

CONCLUSION

The people around the world rely on the agricultural sector as one of the most important sectors where crops are the basic need for food. Early recognition and detection of these diseases are crucial to the agricultural industry. This has achieved its goal to detect and recognize 3 different plant varieties and plant diseases using convolutional neural network. The trained model can be used to test real-time images to detect and recognize plant diseases. For the future work, additional plant varieties and different types of plant diseases may be included in the existing dataset to increase the trained models. Other CNN architectures may also use different learning rates and optimizers for experimenting the performance and accuracy of the model. With the achieved accuracy of ABOVE 90%, the proposed model can assist farmers to detect and recognize plant diseases.

Machine learning methods are used to train the model, which aids in making appropriate disease decisions. To contain infected diseases, the farmer is advised to use pesticides as a cure. In the future, the proposed scheme could be expanded to provide additional facilities such as nearby government markets, pesticide price lists, and a nearby open market, among others. This project presents a review of various disease classification strategies for crop disease detection, as well as an algorithm for image segmentation that can be used for automated detection and classification of plant leaf diseases in the future. Some of the organisms on which the proposed algorithm is evaluated include apple, corn, grape. As a result, similar diseases for these plants were investigated. The best results were obtained with very little computational effort, demonstrating the efficacy of the proposed algorithm in recognizing and classifying crop diseases. Another benefit of this approach is that plant diseases can be detected at an early stage, or even at the beginning. Convolution neural network and Deep neural network algorithms may be used to increase recognition rates in the classification process.

DETECTION OF NON-HELMET RIDERS AND EXTRACTION OF LICENSE PLATE NUMBER USING YOLO V2 AND OCR METHOD

A major project report submitted in partial fulfillment of the requirements

for the award of the degree of

BACHELOR OF TECHNOLOGY

in

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This is to certify that the project report entitled **"DETECTION OF NON-HELMET RIDERS AND EXTRACTION OF LICENSE PLATE NUMBER USING YOLO V2 AND OCR METHOD"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE and is a bonafide record of the work performed by

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ABSTRACT

In current situation, we come across various problems in traffic regulations in India which can be solved with different ideas. Riding motorcycle/mopeds without wearing helmet is a traffic violation which has resulted in increase in number of accidents and deaths in India. Existing system monitors the traffic violations primarily through CCTV recordings, where the traffic police have to look into the frame where the traffic violation is happening, zoom into the license plate in case rider is not wearing helmet.

But this requires lot of manpower and time as the traffic violations frequently and the number of people using motorcycles is increasing day-by-day. What if there is a system, which would automatically look for traffic violation of not wearing helmet while riding motorcycle/moped and if so, would automatically extract the vehicles' license plate number. Recent research have successfully done this work based on CNN, R-CNN, LBP, HoG, HaaRfeatures,etc.

The main principle involved is Object Detection using Deep Learning at three levels. The objects detected are person, motorcycle/moped at first level using YOLOv2, helmet at second level usingYOLOv3, License plate at the last level using YOLOv2. Then the license plate registration number is extracted using OCR (Optical Character Recognition).

CONCLUSION AND FUTURE SCOPE

A Non-Helmet Rider Detection system is developed where a video file is taken as input. If the motorcycle rider in the video footage is not wearing helmet while riding the motorcycle, and then here we are uploading image to identify license plate number of that motorcycle is extracted from image and displayed. Object detection principle with YOLO architecture is used for motorcycle, person, helmet and license plate detection. OCR is used for license plate number extraction if rider is not wearing helmet. Not only the characters are extracted, but also the frame from which it is also extracted so that it can be used for other purposes. All the objectives of the project is achieved satisfactorily.

BRAIN TUMOUR IMAGE SEGMENTATION USING DEEP LEARNING

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

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in

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ABSTRACT

Automated segmentation of brain tumor from multimodal MR images ispivotal for the analysis and monitoring of disease progression. As gliomas aremalignant and heterogeneous, efficient and accurate segmentation techniques are usedfor the successful delineation oftumors into intra-tumoral classes. Deep learningalgorithms outperform on tasks of semantic segmentation as opposed to the moreconventional, context-based computer vision approaches. Extensively used forbiomedical image segmentation, Convolutional Neural Networks have significantlyimproved the state-of-the-art accuracy on the task of brain tumor segmentation.In this paper, we propose an ensemble of two segmentation networks: a 3DCNN and a U-Net, in a significant yet straightforward combinative technique thatresults in better and accurate predictions. Both models were trained separately on theBraTS-19 challenge dataset and evaluated to yield segmentation maps whichconsiderably differed from each other in terms of segmented tumor sub-regions andwere ensembled variably to achieve the final prediction.

CHAPTER 9

CONCLUSION & FUTURE WORK

9.1 CONCLUSION

In this project we are using Image Segmentation method. We have used a hybrid of two different techniques, i.e. Watershed and Contrast Technique. This technique is well suited for detection of tumor in the image. This segmentation method gives high accuracy as compare to other methods. MRI images are best suitable for brain tumor detection. In this study Digital Image Processing Techniques are important for brain tumor detection by MRI images. The preprocessing techniques include different methods like Filtering, Contrast enhancement, Edge detection is used for image smoothing. The preprocessed images are used for post processing operations like; threshold, histogram, segmentation and morphological, which is used to enhance the images.

9.2 FUTURE WORK

In this study Digital Image Processing Techniques are important for brain tumor detection by MRI images. The preprocessing techniques include different methods like Filtering, Contrast enhancement, Edge detection is used for image smoothing. The preprocessed images are used for post processing operations like; threshold, histogram, segmentation and morphological, which is used to enhance the images.

Dual Access Control for Cloud-Based Data Storage and Sharing

A major project report submitted in partial fulfillment of the requirements

for the award of the degree of

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ABSTRACT

Due to its effective and affordable administration, cloud-based data storage has recently attracted growing interest from academia and business. Since services are delivered via an open network, it is critical for service providers to adopt secure data storage and sharing mechanisms to protect user privacy and the confidentiality of data. The most popular technique for preventing the compromise of sensitive data is encryption. The actual necessity for data management, however, cannot be fully met by merely encrypting data (for instance, using AES). Additionally, to avoid Economic Denial of Sustainability (EDoS) attacks that are undertaken to prohibit users from accessing the service, a robust access control over download requests must be taken into consideration. This article presents the design of two dual access control systems, one for each intended environment. There is also a presentation of the systems' experimental and security analyses. This article presents the design of two dual access control systems, one for each intended environment. Additionally, the systems' experimental analysis and security are presented.

CHAPTER 10

CONCLUSION

We addressed an interesting and long-lasting problem in cloud-based data sharing, and presented two dual access control systems. The proposed systems are resistant to DDoS/EDoS attacks. We state that the technique used to achieve the feature of control on download request is "transplantable" to other CPABE constructions. Our experimental results show that the proposed systems do not impose any significant computational and communication overhead (compared to its underlying CP-ABE building block).

[illegible] A New Deep Learning Model for Skin Cancer Classification

Project Work Report submitted in partial Fulfilment of the requirements for the award of the degree of

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ABSTRACT

Skin cancer is a devastating disease that affects millions of people worldwide. It is caused by the uncontrolled growth of cells in the skin, leading to the formation of tumors that can be difficult to detect and treat. Early diagnosis and accurate classification of skin cancer are critical for effective treatment and management. In recent years, deep learning models have shown great potential in accurately classifying skin cancer lesions, providing a valuable tool for dermatologists and other healthcare professionals in this study, we propose a new deep learning model for skin cancer classification that uses a convolutional neural network architecture with 7 convolution layers and 3 neural layers. The model was trained on a dataset consisting of 7 classes of dermoscopic images, which are commonly used in dermatology for the diagnosis of skin cancer. Our model was designed to accurately classify different types of skin lesions, including melanoma, basal cell carcinoma, and squamous cell carcinoma, among others to evaluate the performance of our model, we compared it with several state-of-the-art skin cancer classification models on benchmark datasets. Our results show that our proposed model outperforms these existing models in terms of accuracy, sensitivity, and specificity, achieving an overall accuracy of over 90%.The results of our study demonstrate the potential of deep learning models in improving the accuracy and efficiency of skin cancer diagnosis, which could ultimately lead to better patient outcomes. This research highlights the importance of using advanced technologies, such as deep learning, to aid in the diagnosis and treatment of complex diseases like skin cancer.

CHAPTER 8

CONCLUSION

Building a successful deep neural network typically requires a significant number of labeled images for training. However, acquiring such a large dataset can be challenging and time-consuming. To address this challenge, two techniques, namely transfer learning and image augmentation, are applied to a pre-trained model called AlexNet.Transfer learning involves utilizing the knowledge gained by a pre-trained model, which has been trained on a large dataset, and applying it to a different but related task. In this case, the pre-trained AlexNet model is used as a starting point, and the last layer, responsible for classification, is replaced with a new layer that has three output classes (corresponding to the three different lesions being classified). By reusing the weights of the pre-trained model and modifying only the last layer, the model can leverage the learned representations from the large dataset and adapt them to the specific task of classifying the three different lesions.Additionally, image augmentation techniques are applied to increase the diversity and variability of the available dataset. Image augmentation involves applying various transformations to the existing images, such as rotation, scaling, flipping, and adding noise. By introducing these modifications, the dataset is augmented, effectively increasing the number of training examples. This helps the model generalize better to unseen images and reduces overfitting.The modified model, with the last layer replaced and the pre-trained weights, is fine-tuned using the augmented dataset. Fine-tuning involves updating the weights of the modified model using a smaller dataset specific to the three lesions being classified. This step allows the model to specialize its learned representations to better fit the target task.To evaluate the performance of the proposed method, four performance measures are computed. These measures assess the accuracy and effectiveness of the model in classifying the three different lesions. The specific performance measures used are not mentioned, but common metrics include accuracy, precision, recall, and F1 score.

Detection of Cyber Attacks in Network using Machine Learning Techniques

A major project report submitted in partial fulfillment of the requirements

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ABSTRACT

Contrasted with the past, improvements in PC and correspondence innovations have given broad and propelled changes. The use of new innovations give incredible advantages to people, organizations, and governments, be that as it may, messes some up against them. For instance, the protection of significant data, security of put away information stages, accessibility of information and so forth. Contingent upon these issues, digital fear-based oppression is one of the most significant issues in this day and age. Digital fear, which made a great deal of issues people and establishments, has arrived at a level that could undermine open and nation security by different gatherings, for example, criminal association, proficient people and digital activists. Along these lines, Intrusion Detection Systems (IDS) has been created to maintain a strategic distance from digital assaults.

CHAPTER-7
CONCLUSION & FUTURE SCOPE

Right now, estimations of decision tree, SVM, Random Forest and profound learning calculations dependent on modern dataset were introduced relatively. Results show that the profound learning calculation performed fundamentally preferable outcomes over We are going to utilize port sweep endeavors as well as other assault types with AI and profound learning calculations, apache Hadoop and sparkle innovations together dependent on this dataset later on. All these calculation helps us to detect the cyber attack in network. It happens in the way that when we consider long back years there may be so many attacks happened so when these attacks are recognized then the features at which values these attacks are happening will be stored in some datasets. So by using these datasets we are going to predict whether cyber attack is done or not. These predictions can be done by three algorithms this paper helps to identify which algorithm predicts the best accuracy rates which helps to predict best results to identify the cyber attacks happened or not. In enhancement we will add some ML Algorithms to increase accuracy .

PREDICTING STOCK MARKET TRENDS USING MACHINE LEARNING AND DEEP LEARNING ALGORITHMS VIA CONTINUOUS AND BINARY DATA A COMPARATIVE ANALYSIS

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

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ABSTRACT

The stock market is a complex and volatile system, which makes it difficult to predict future trends. In recent years, machine learning and deep learning algorithms have gained popularity for their ability to analyze large amounts of data and make predictions. This study aims to compare the effectiveness of machine learning and deep learning algorithms in predicting stock market trends using continuous and binary data. we collected historical stock market data and applied machine learning and deep learning algorithms to predict future trends. We compared the performance of two types of algorithms: Random Forest and LSTM (Long Short-Term Memory) neural network. We also used two types of data: continuous data (such as stock price, volume, and other financial indicators) and binary data (such as news sentiment analysis, economic indicators, and market news). The results show that LSTM neural network outperformed Random Forest in both continuous and binary data prediction. Moreover, binary data proved to be more effective in predicting stock market trends than continuous data.

CHAPTER 7

CONCLUSION

The purpose of this study was the prediction task of stock market movement by machine learning and deep learning algorithms. Four stock market groups, namely diversified financials, petroleum, non-metallic minerals and basic metals, from Tehran stock exchange were chosen, and the dataset was based on ten years of historical records with ten technical features. Also, nine machine learning models (Decision Tree, Random Forest, Adaboost, XGBoost, SVC, Naïve Bayes, KNN, Logistic Regression and ANN) and two deep learning methods (RNN and LSTM) were employed as predictors. We supposed two approaches for input values to models, continuous data and binary data, and we employedthree classification metrics for evaluations. Our experimental works showed that there was a significant improvement in the performance of models when they use binary data instead of continuous one. Indeed, deep learning algorithms (RNN and LSTM) were our superior models in both approaches.

QR BASED ATTENDANCE SYSTEM

A major project report submitted in partial fulfillment of the requirements
for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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MOHAMMAD RIYAZ	(19S41A0554)
M.KUSHAL KUMAR	(19S41A0562)
SD.NAMAAN QADRI	(19S45A0587)

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ABSTRACT

In this era of technology smartphones play a significant role in our day to day life. Nowadays smartphones can solve most of the problem very quickly and easily. It has made life of every person simple and easier with different social app, commercial app, problem solving app, app for education and marketing etc. Followed by the technology the paper purposed a system that will handle a problem for recording the attendance.

The proposed system is a couple of two applications, one for generating the QR Code by entering the student details and second application for taking the attendance and generating the attendance. The teacher will need to scan the QR code of the particular student in order to confirm their attendance.

7.CONCLUSION & FUTURE SCOPE

The developed system presented in this paper has been successfully designed and tested. The student's attendance status will be analysed and exported. Attendance monitoring system is very important in our daily life. It is possesses a really great advantage, among the whole types of code scanning technology, QR Code Based Smart Attendance System is the most accurate. In this project report, we have given an introduction of Attendance monitoring system and its advantage.

EFFICIENT CP-ABE SCHEME WITH SHARED DECRYPTION IN CLOUD STORAGE

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

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This is to certify that the project report entitled **"EFFICIENT CP-ABE SCHEME WITH SHARED DECRYPTION IN CLOUD STORAGE"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE, and is a bonafide record of the work performed by.

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ABSTRACT

Attribute-based encryption (ABE) is a preferred technology used to access control the data stored in the cloud servers. However, in many cases, the authorized decryption user may be unable to decrypt the ciphertext in time for some reason. To be on the safe side, several alternate users are delegated to cooperate to decrypt the ciphertext, instead of one user doing that. We provide a ciphertext-policy ABE scheme with shared decryption in this article. An authorized user can access the messages independently. Cloud Storage is an new storage technology based on network and cloud computing which provides unlimited storage resources for data users. Users can easily access the data stored in the cloud from anywhere in the world. More personal and corporate data are being stored on cloud storage servers.

CHAPTER- 8

CONCLUSION

We provide two cipher text-policy attribute based encryption schemes with shared decryption. There are two kinds of data users in our schemes. For an authorized user, he/she can recover the message independently. When the authorized user cannot decrypt the cipher text in time for some reason, these semi-authorized userscan cooperate to decrypt the cipher text to replace the authorized user. An integrated access tree is used in proposed schemes to improve the efficiency of the schemes. The security for our schemes is proved underthe DBDH assumption. The experimental result shows that CP-ABE-SD scheme is better than scheme [11,33,36] in terms of storage cost and computational overhead.

A DRIVING DECISION STRATEGY(DDS) BASED ON MACHINE LEARNING FOR AN AUTONOMOUS VEHICLE

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

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in

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ABSTRACT

A current autonomous vehicle determines its driving strategy by considering only external factors (Pedestrians, road conditions, etc.) without considering the interior condition of the vehicle. To solve the problem, this project proposes "A Driving Decision Strategy(DDS) Based on Machine learning for an autonomous vehicle" which determines the optimal strategy of an autonomous vehicle by analyzing not only the external factors, but also the internal factors of the vehicle (consumable conditions, RPM levels etc.). The DDS learns a genetic algorithm using sensor data from vehicles stored in the cloud and determines the optimal driving strategy of an autonomous vehicle. This project compared the DDS with Multilayer Perceptron(MLP) and Random Forest(RF) neural network models to validate the DDS. In the experiment, the DDS had a loss rate approximately 5% lower than existing vehicle gateways and the DDS determined RPM, speed, steering angle and lane changes 40% faster than the MLP and 22% faster than the RF.

CHAPTER 8
CONCLUSION

This project proposed a Driving Decision Strategy. It executes the genetic algorithm based on accumulated data to determine the vehicle's optimal driving strategy according to the slope and curvature of the road in which the vehicle is driving and visualizes the driving and consumables conditions of an autonomous vehicle to provide drivers. To verify the validity of the DDS, experiments were conducted on the DDS to select an optimal driving strategy by analyzing data from an autonomous vehicle. Though the DDS has a similar accuracy to the MLP, it determines the optimal driving strategy 40% faster than it. And the DDS has a higher accuracy of 22% than RF and determines the optimal driving strategy 20% faster than it. Thus, the DDS is best suited for determining the optimal driving strategy that requires accuracy and real-time.

Because the DDS sends only the key data needed to determine the vehicle's optimal driving strategy to the cloud and analyzes the data through the genetic algorithm, it determines its optimal driving strategy at a faster rate than existing methods. However, the experiments of the DDS were conducted in virtual environments using PCs, and there were not enough resources for visualization.

IMAGE CLASSIFICATION OF THE FLOWER SPECIES IDENTIFICATION USING MACHINE LEARNING

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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This is to certify that the project report entitled **"IMAGE CLASSIFICATION OF THE FLOWER SPECIES IDENTIFICATION USING MACHINE LEARNING"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE, and is a bonafide record of the work performed by

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ABSTRACT

Image classification has become one of the key use-cases for demonstrating machine learning. The proposed work will try to classify the given input image of flower species, based on the dataset provided. And it produces an output with the classification of flower in the input image. Flower identification systems are prominently used nowadays. Although modern search engines give mechanisms for visually searching for a query image containing a flower, robustness is lacking due to the intra-class variation among millions of flowers species worldwide. Therefore, a Machine Learning method using Convolution Neural Networks is used in this proposed research work to identify highly accurate flower species. The flower image extraction function is performed using a Pre-Trained Network Extraction of Complex features. On top of that, a machine learning classifier such as Logistic Regression or Random Forest is used to produce a higher precision score. This approach helps to reduce the system requirements required to conduct a Convolution Neural Networks (CNN) to compute the intensive training task.

8. CONCLUSION

The question of the all out types of blossom being known is partitioned into three sections. First thing is, picture attributes are recovered from the preparation dataset utilizing Convolution Neural Network and put away to organize HDF5 records. Also, the organization will be prepared utilizing different AI classifiers, like Bagging Tress, Linear Classification Analysis, Gaussian Naive Bayes, K-Nearest Neighbor, Logistic Regression, Decision Tress, Random Forests and Stochastic Gradient Boosting. At last, the irregular test pictures are given to the organization for mark expectation to evaluate the exactness of the gadget. The product accurately distinguishes bloom species with a Rank of 64.28 utilizing Random Forest as the FLOWERS17 dataset AI classifier

FUTUREWORK

Future work can be fostering the calculation better divided strategies. So there is an extent of progress in the procedures.

DRUG RECOMMENDATION SYSTEM BASED ON SENTIMENT ANALYSIS OF DRUG REVIEWS USING MACHINE LEARNING

A major project report submitted in partial fulfillment of the requirements

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ABSTRACT

Since coronavirus has shown up, inaccessibility of legitimate clinical resources is at its peak, like the shortage of specialists and healthcare workers, lack of proper equipment and medicines etc. The entire medical fraternity is in distress, which results in numerous individual's demise. Due to unavailability, individuals started taking medication independently without appropriate consultation, making the health condition worse than usual. As of late, machine learning has been valuable in numerous applications, and there is an increase in innovative work for automation.

This paper intends to present a drug recommender system that can drastically reduce specialists heap. In this research, we build a medicine recommendation system that uses patient reviews to predict the sentiment using various vectorization processes like Bow, TF-IDF,Word2Vec, and Manual Feature Analysis, which can help recommend the top drug for a given disease by different classification algorithms. The predicted sentiments were evaluated by precision, recall, f1score, accuracy, and AUC score. The results show that classifier LinearSVC using TF-IDF vectorization outperforms all other models with high accuracy.

7. CONCLUSIONS AND FUTURE SCOPE

Reviews are becoming an integral part of our daily lives; whether go for shopping, purchase something online or go to some restaurant, we first check the reviews to make the right decisions. Motivated by this, in this research sentiment analysis of drug reviews was studied to build a recommender system using different types of machine learning classifiers, such as Logistic Regression, Perceptron, Multinomial Naive Bayes, Ridge classifier, Stochastic gradient descent, LinearSVC, applied on Bow, TF-IDF, and classifiers such as Decision Tree, Random Forest, Lgbm, and Catboost were applied on Word2Vec and Manual features method. We evaluated them using five different metrics, precision, recall, f1score, accuracy, and AUC score, which reveal that the Linear SVC on TF-IDF outperforms all other models with 93% accuracy. On the other hand, the Decision tree classifier on Word2Vec showed the worst performance by achieving only 78% accuracy. We added best-predicted emotion values from each method, Perceptron on Bow (91%), LinearSVC on TF-IDF (93%), LGBM on Word2Vec (91%), Random Forest on manual features (88%), and multiply them by the normalized usefulCount to get the overall score of the drug by condition to build a recommender system. Future work involves comparison of different oversampling techniques, using different values of n-grams, and optimization of algorithms to improve the performance of the recommender system

TITLE: Location-Based Crime Reporting

A major project report submitted in partial Fulfilment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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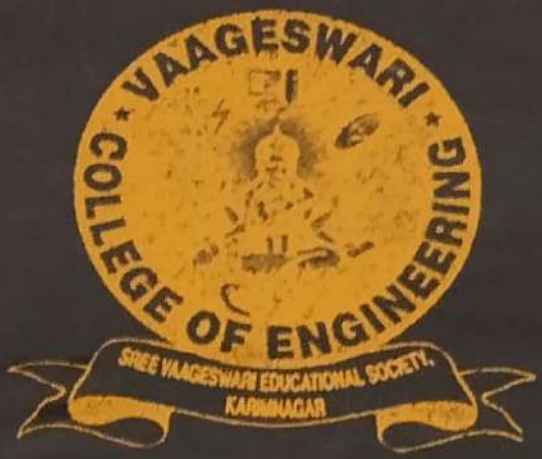

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ABSTRACT

Location-based crime reporting refers to the practice of using geographic information systems (GIS) and spatial analysis techniques to analyze and visualize crime data in relation to specific locations. It involves collecting crime data from various sources, such as police reports or citizen reports, and mapping that data to understand patterns and trends in crime.

The primary objective of location-based crime reporting is to enhance crime analysis and aid in decision-making for law enforcement agencies and other stakeholders. By mapping crime incidents onto a map, it becomes possible to identify crime hotspots, understand crime patterns, and allocate resources more effectively. This approach can help law enforcement agencies to deploy officers strategically, implement targeted interventions, and ultimately improve public safety.

Location-based crime reporting can also be utilized by the public to access crime information specific to their area. Many cities and communities have developed online platforms or mobile applications that provide real-time crime data and alerts. This empowers citizens to stay informed about crime incidents in their vicinity, take necessary precautions, and report suspicious activities to law enforcement authorities.

Overall, location-based crime reporting leverages spatial analysis and visualization techniques to provide valuable insights into crime patterns, facilitate resource allocation, and promote community engagement in crime prevention efforts.

CHAPTER – 9 CONCLUSION

9.1 – CONCLUSION

The Task Management Android Application project aims to address the challenges individuals face in managing their tasks, staying organized, and optimizing their productivity. By developing a comprehensive and user-friendly application, the project offers a solution that helps users efficiently manage their tasks, set reminders, track progress, collaborate with others, and integrate with their device's calendar.

The app's features, such as task creation and organization, reminder and notification system, task tracking and progress monitoring, task prioritization and sorting, collaboration and sharing, calendar integration, and data backup and sync, provide users with a powerful tool to streamline their task management process and enhance their productivity.

Through the development of the Task Management Android Application, users can benefit from a seamless and intuitive user experience, enabling them to effectively manage their tasks, meet deadlines, and prioritize activities. The project contributes to reducing stress, increasing efficiency, and improving overall task management practice

44

PRICE NEGOTIATING CHATBOT ON E-COMMERCE WEBSITE

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

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in

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ABSTRACT

In recent years online shopping has gained a huge boom. With this increase, most of the features of online shopping are developed but some features like negotiating with shopkeepers are not available which is sometimes possible in offline purchasing. We have implemented a chatbot for negotiating on the products.

The chatbot interacts with customers and assists them to get a satisfactory price on product(s). With such a system, which impacts on major areas of online shopping there are possibilities in which either the seller of the product or customer's budget gets compromised. To avoid such situations we have developed an algorithm which works along with prediction of old available data to provide a price Now-a-days almost 75% peoples are using online services to purchase products but todays online services are lack of price negotiating which may turn down other customers to purchase online which can cause loss to online market and to overcome from this problem author of this paper is introducing NEGOTIATING CHATBOT which can use by customers to negotiate prices.

Chatbot get trained on machine learning algorithms such as SVM and KNN by using E-Commerce data and once after training this model can be used to predict best prices and this prices will be suggested to customers by Chatbot and if customer still not satisfy with predicted prices then Chatbot will apply max discount on predicted price and then suggest final price to the customer. If customer satisfy with the price then he can confirm order or browse products list again to get product on his budget.

7.CONCLUSION

The negotiation on products is a challenging task when it comes to e-commerce systems. We tried a primary chatbot that covers many aspects and cases for negotiation but is not evident to provide the best results.

• The chatbot which we created sometimes falls to the price customers ask for though it is always greater than minimum price but may result in loss for seller if it goes the same for many customers. Such situations have to be handled.

• We used various algorithms such as SVM, KNN but in future there may be some better price prediction algorithms which can be used. • [Reference 7] shows the ways in which a user can better negotiate with chatbot and get cheaper prices. Such cases should be handled.

• KBAgent is considered to be better when it comes to negotiation, this can be added to our application. An example can be Apple's Siri which has huge knowledge base to provide satisfactory outcomes.

AGRICULTURE HELPER CHATBOT

A major project report submitted in partial fulfillment of the requirements

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ABSTRACT

As India has an agro-based economy, 58% of its population relies on agriculture as its primary method of livelihood. In spite of this, the economic survey for 2019-2020 indicates that agriculture growth inIndia has stagnated around 2.9% annually for the past 6 years. Considering the number of people in India still relying on it, it is real concern. One of the prevailing issues is lack of right information. This problem can be solved by providing farmers with expert advice and relevant information. In this paper, the proposed chatbot called AgroBot is a multi-user chat application.

AgroBot can overcome this problem by allowing farmers to obtain the information they need to succeed in an ever-changing market and to enlarge with new technology and market demand in an easy- touse manner. In this project we are designing Chatbot for farmers where Chatbot ask farmer to upload crop image and then application will apply Deep Learning CNN algorithm to predict disease from that crop leaf and display possible remedies. After getting remedies user can ask question related to crop such as cropname and then Chatbot will display soil, rainfall and other details.

CHAPTER 8
CONCLUSION

A large and open problem in an economy such as India that is dominated by agriculture is to build scalable, reliable, real-time, 24/7 responsive applications. An application called AgroBot proposed in this paper, which combines NLP and machine learning, provides natural language answers to farming-related questions in a multiuser chat environment. Utilizing natural language technology, our chatbot can impact uneducated people by offering information related to agriculture and horticulture.

By using the messaging app, farmers will have access to agricultural information and localized information such as market prices and weather forecasts for their area.

MISSING CHILD IDENTIFICA'TION USINGDEEP LEARNING AND MULTICLASS SVM FINAL

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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HEENA TABASSUM	19841A0533
MAZIA YAMEEN	19841A0550
GANDLA SAI ROHAN	19841A0528

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ABSTRACT

In India a countless number of children are reported missing every year. Among the missing child cases a large percentage of children remain untraced.

Deep learning methodology identifies the reported missing child from the photos of multitude of children available, with the help of face recognition. The public can upload photographs of suspicious children into a common portal with landmarks and remarks. The photo will be automatically compared with the registered photos of the missing child from the repository. Classification of the input child image is performed and photo with best match will be selected from the database of missing children. For this, a deep learning model is trained to correctly identify the missing child from the missing child image database provided, using the facial image uploaded by the public.

The Convolutional Neural Network (CNN), a highly effective deep learning technique for image-based applications, is adopted here for face recognition. Face descriptors are extracted from the images using a pre-trained CNN model VGG-Face deep architecture. Compared with normal deep learning applications, our algorithm uses convolution network only as a high-level feature extractor and the child recognition is done by the trained SVM classifier.

CHAPTER-8

CONCLUSION

A missing child identification system is proposed, which combines the powerful CNN based deep learning approach for feature extraction and support vector machine classifier for classification of different child categories. This system is evaluated with the deep learning model which is trained with feature representations of children faces. By discarding thesoftmax of the VGG-Face model and extracting CNN image features to train a multi class SVM, it was possible to achieve superior performance. Performance of the proposed system is tested using the photographs of children with different lighting conditions, noises and also images at different ages of children. The classification achieved a higher accuracy of 99.41% which shows that the proposed methodology of face recognition could be used for reliable missing children identification.

FUTURE SCOPE

In future we will use some more efficient algorithms to improve accuracy and efficiency for my application.

DIGITAL RESTAURANT

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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A. SAI MADHAVAN	**(20S45A0501)**
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This is to certify that the major project report entitled **"DIGITAL RESTAURANT"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE, and is a bonafide record of the work performed by.

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ABSTRACT

Suppose if we go to the restaurant there is lot of manual process is there first the waiter will come to our bench and he will give the menu and we need to read that menu and order the things but here there is a problem what ever the items are available in the menu all items are not ready in the restaurant so that menu is not updated. if we use this application we will provide a one qr code to customers if they scan that qr code they can able to see the menu and also restaurant owner can update the menu daily with prices.

8. CONCLUSION

In conclusion, a digital restaurant Android application system offers a range of features and functionalities aimed at improving the overall dining experience for customers. It enables users to register and login, browse menus, place online orders, make table reservations, and track order statuses. The integration with online payment gateways ensures secure and convenient transactions. Loyalty and rewards programs incentivize customer retention, while reviews and ratings provide valuable feedback for both customers and restaurant owners. The system also incorporates customer support channels and options for personalized recommendations. Overall, a well-designed digital restaurant Android application system can enhance efficiency, customer satisfaction, and business growth in the restaurant industry.

A LOW-LIGHT IMAGE ENHANCEMENT USING CNN

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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ABSTRACT

Image enhancement is a technique used to get a better quality of an image in terms of its clarity, brightness and to give the human eye comfortable to look at. There are different types of techniques to give good quality of an image. Global image contrast enhancement is one of the most commonly used technique to enhance the quality of an image, but it has some disadvantages with the fact that it does not consider the local details of an image. Local details of an image are very important while analysing an image, which is that of the scientific study of an image like the image taken from planetary bodies, satellite image and medical images.

CONCLUSION

Combination of both local and global contrast enhancement techniques are employed to improve the visual quality of an image, where a local enhancement method is applied first to enhance the local details of the image, which is not taken care and usually neglected in the global contrast enhancement. The locally enhanced image is given to the input of global enhancement for better visual perceptions and increases the brightness to a level which gives pleasant sensation to the human eye. This method works fine in most of the dark images.

CRIME RATE PREDICTION & ANALYSIS USING K-MEANS CLUSTERING ALGORITHM

A project report submitted in partial fulfillment of the requirementsfor the award of the degree of

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in

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ABSTRACT

-In India, the crime rate is increasing each day. In the current situation, recent technological influence, effects of social media and modern approaches help the offenders to achieve their crimes. Both analysis and prediction of crime is a systematized method that classifies and examines the crime patterns. There exist various clustering algorithms for crime analysis and pattern prediction but they do not reveal all the requirements. Among these, K means algorithm provides a better way for predicting the results. The proposed research work mainly focused on predicting the region with higher crime rates and age groups with more or less criminal tendencies. We propose an optimized K means algorithm to lower the time complexity and improve efficiency in the result.

CHAPTER-11

CONCLUSION

This project focuses on crime analysis by implementing clustering algorithm on crime dataset using rapid miner tool and here we do crime analysis by considering crime homicide and plotting it with respect to year and got into conclusion that homicide is decreasing from 1990 to 2011 .From the clustered results it is easy to identify crime trend over years and can be used to design precaution methods for future.

FUTURE SCOPE :

From the encouraging results, we believe that crime data mining has a promising future for increasin the effectiveness and efficiency of criminal and intelligence analysis. Visual and intuitive criminal and intelligence investigation techniques can be developed for crime pattern. As we have applied clustering technique of data mining for crime analysis we can also perform other techniques of data mining such as classification. Also we can perform analysis on various dataset such as enterprise survey dataset, poverty dataset, aid effectiveness dataset, etc.

DEEP LEARNING-BASED OBJECT DETECTION AND RECOGNITION FRAMEWORK FOR THE VISUALLY IMPAIRED

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

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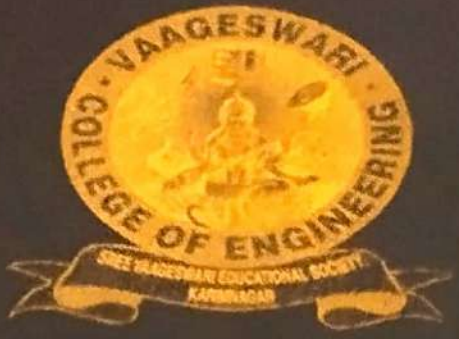

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This is to certify that the project report entitled" **DEEP LEARNING BASED OBJECT DETECTION AND RECOGNITION FRAMEWORK FOR THE VISUALLY-IMPAIRED"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE, and is a bonafide record of the work performed by

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ABSTRACT

Abstract—Vision impairment or blindness is one of the top ten disabilities in humans, and unfortunately, India is home to the world's largest visually impaired population. In this study,we present a novel framework to assist the visually impaired in object detection and recognition, so that they can independently navigate, and be aware of their surroundings. The paper employs on yolo mechanism for object detection and classification, followed by recognition of human faces and currency notes. yolo detector is trained on the coco dataset, in which a new class is added, to enable the detection of currency as well. Ultimately, theoutput from the framework can then be presented to the visually impaired person in audio format. The mean Accuracy and Precision (mAP) scores of the standalone yolo detector of the added currency class were 67.8 percent, the testing accuracy of person and currency recognition.

8. CONCLUSION

A novel framework employing object detection, classification, and face and currency recognition has been presented to assist the visually impaired people. It is fairly simple, and easy to deploy, once the training part is complete. Using separate Inception models for faces and currency recognition makes it faster, user-specific and adaptable. It is one of the most generic frameworks, integrating all the useful features, and will surely prove to be a great service to mankind. Future work can be done to make the face and currency recognition spoof-proof.

In conclusion, the deep learning-based object detection and recognition framework has potentially to greatly improve the lives of those who are visually impaired. By addressing the challenges faced by this community, we can empower individuals to live more independently and confidently.

DEEP LEARNING-BASED OBJECT DETECTION AND RECOGNITION FRAMEWORK FOR THE VISUALLY IMPAIRED

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ABSTRACT

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In conclusion, the deep learning-based object detection and recognition framework has potentially to greatly improve the lives of those who are visually impaired. By addressing the challenges faced by this community, we can empower individuals to live more independently and confidently.

A LOW-LIGHT IMAGE ENHANCEMENT USING CNN

A major-project report submitted in partial fulfillment of the requirements for the award of the degree of

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ABSTRACT

Image enhancement is a technique used to get a better quality of an image in terms of its clarity, brightness and to give the human eye comfortable to look at. There are different types of techniques to give good quality of an image. Global image contrast enhancement is one of the most commonly used technique to enhance the quality of an image, but it has some disadvantages with the fact that it does not consider the local details of an image. Local details of an image are very important while analysing an image, which is that of the scientific study of an image like the image taken from planetary bodies, satellite image and medical images.

CONCLUSION

Combination of both local and global contrast enhancement techniques are employed to improve the visual quality of an image, where a local enhancement method is applied first to enhance the local details of the image, which is not taken care and usually neglected in the global contrast enhancement. The locally enhanced image is given to the input of global enhancement for better visual perceptions and increases the brightness to a level which gives pleasant sensation to the human eye. This method works fine in most of the dark images.

DETECTION OF CARDIOVASCULAR DISEASES IN ECG IMAGES USING DEEP LEARNING METHODS

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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ABSTRACT

Cardiovascular diseases (heart diseases) are the leading cause of death worldwide. The earlier they can be predicted and classified; the more lives can be saved. Electrocardiogram (ECG) is a common, inexpensive, and noninvasive tool for measuring the electrical activity of the heart and is used to detect cardiovascular disease. In this article, the power of deep learning techniques was used to predict the four major cardiac abnormalities: abnormal heartbeat, myocardial infarction, history of myocardial infarction, and normal person classes using the public ECG images dataset of cardiac patients. First, the transfer learning approach was investigated using the low-scale pretrained deep neural networks SqueezeNet and AlexNet. Second, a new convolutional neural network (CNN) architecture was proposed for cardiac abnormality prediction. Third, the aforementioned pretrained models and our proposed CNN model were used as feature extraction tools . According to the experimental results, the performance metrics of the proposed CNN model outperform the exiting works; it achieves better accuracy.

CHAPTER 7

CONCLUSION

In this article, we propose a lightweight CNN-based model to classify the four major cardiac abnormalities using public ECG images dataset of cardiac patients. According to the results of the experiments, the proposed CNN model achieves remarkable results in cardiovascular disease classification and can also be used as a feature extraction tool for the traditional machine learning classifiers. Thus, the proposed CNN model can be used as an assistance tool for clinicians in the medical field to detect cardiac diseases from ECG images and bypass the manual process that leads to inaccurate and time-consuming results.

In the future work, optimization techniques can be used to obtain optimized values for the hyperparameters of the proposed CNN model. The proposed model can also be used for predicting other types of problems. Since, the proposed model belongs to the family of low-scale deep learning methods in terms of the number of layers, parameters, and depth. Therefore, a study on using the proposed model in the Industrial Internet of Things domain for classification purposes can be explored.

A Honeypot with Machine Learning based Detection Framework for defending IoT based Botnet DDoS

A major project report submitted in partial fulfillment of the requirements

for the award of the degree of

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This is to certify that the project report entitled **"A HONEYPOT WITH MACHINE LEARNING BASED DETECTION FRAMEWORK FOR DEFENDING IOT BASED BOTNET DDOS ATTACKS"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE, and is a bonafide record of the work performed by

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ABSTRACT

With the tremendous growth of IoT botnet DDoS attacks in recent years, IoT security has now become one of the most concerned topics in the field of network security. A lot of security approaches have been proposed in the area, but they still lack in terms of dealing with newer emerging variants of IoT malware, known as Zero-Day Attacks. In this paper, we present a honeypot-based approach which uses machine learning techniques for malware detection. The IoT honeypot generated data is used as a dataset for the effective and dynamic training of a machine learning model. The approach can be taken as a productive outset towards combatting Zero-Day DDoS Attacks which now has emerged as an open challenge in defending IoT against DDoS Attacks.

8.CONCLUSION

Internet-of-things is the biggest reason for the modernization of the real world in terms of technology. But it is also the main reason for the increasing number of cyber attacks especially DDoS attacks. That's why defending against such attacks that use IoT as a medium to harm network security has become the primary concern in the field of Internet Security. A number of defense mechanisms have been proposed in the concerned field to make the IoT network immune to such attacks but they become incapable of handling new variants of IoT botnet attacks. We came up with a honeypot based solution for the DDoS detection which uses real- time machine learning detection framework. Use of honeypots will ensure the logging of newly coming malware features which will be utilized by ML-based detection framework to train their classifiers effectively. For the future scope, we need to extend this approach to the next level where we can find out the open challenges or issues by implementing over the real-time scenarios. There is also scope for employing a cloud server to deal with extremely resource-constrained IoT devices. Finally, we can come up with a comparative analysis of our proposed solution by evaluating its performance in contrast to other proposed models.

REAL TIME COLLEGE BUS TRACKING SYSTEM

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

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2022-23

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CERTIFICATE

This is to certify that the project report entitled " **REAL TIME COLLEGE BUS TRACKING SYSTEM"** submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in CSE, and is a bonafide record of the work performed by.

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The work embodied in this project report has not been submitted to any other institution for the award of the degree

Internal Guide

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ABSTRACT

This Project proposes a Real-Time College Bus Tracking Application which runs on Android smart phones. This enables students to find out the location of the bus so that they won't get late or won't arrive at the stop too early.

The main purpose of this application is to provide exact location of the student's respective buses in Google Maps besides providing information like bus details, driver details, stops, contact number, routes, etc. This application may be widely used by the college students since Android smart phones have become common and affordable for all. It is a real time system as the current location of the bus is updated every moment in the form of latitude and longitude which is received by the students through their application on Google maps. The application also estimates the time required to reach a particular stop on its route. The application uses client-server technology

8 CONCLUSION

CONCLUSION

We developed an Android Application to track the college buses and provide relevant information to their users. This paper has described the design and architecture of our college bus tracking system. Our system is composed of smart phones and a server. The system is able to demonstrate its performance to track college bus from any area. Furthermore, our system is low-cost as it doesn't require any external hardware for location tracking.

REAL TIME COLLEGE BUS TRACKING SYSTEM

A major project report submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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