TRAFFIC PREDICTION FOR INTELLIGENT TRANSPORTATION SYSTEM USING MACHINE LEARNING

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

Department of Computer Science & Engineering
VAAGESWARI COLLEGE OF ENGINEERING

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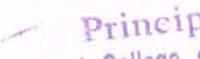
ABSTRACT

This paper aims to develop a tool for predicting accurate and timely traffic flow Information. Traffic Environment involves everything that can affect the traffic flowing on the road, whether it's traffic signals, accidents, rallies, even repairing of roads that can cause a jam. If we have prior information which is very near approximate about all the above and many more daily life situations which can affect traffic then, a driver or rider can make an informed decision. Also, it helps in the future of autonomous vehicles. In the current decades, traffic data have been generating exponentially, and we have moved towards the big data concepts for transportation. Available prediction methods for traffic flow use some traffic prediction models and are still unsatisfactory to handle real-world applications. This fact inspired us to work on the traffic flow forecast problem build on the traffic data and models.It is cumbersome to forecast the traffic flow accurately because the data available for the transportation system is insanely huge. In this work, we planned to use machine learning, genetic, soft computing, and deep learning algorithms to analyse the big-data for the transportation system with much-reduced complexity. Also, Image Processing algorithms are involved in traffic sign recognition, which eventually helps for the right training of autonomous vehicles.

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8. CONCLUSION AND FUTURE ENHANCEMENT

Although deep learning and genetic algorithm is an important problem in data analysis, it has not been dealt with extensively by the ML community. The proposed algorithm gives higher accuracy than the existing algorithms also, It improves the complexity issues throughout the dataset. Also we have planned to integrate the web server and the application. Also the things algorithms will be further improved to much more higher accuracy factors that have a tangible effect on the performance of the studied deep learning algorithms in the field of the SFP.

FUTURE ENHANCEMENT

For future work, it would be worthwhile to investigate the relationship between the dataset and its fault ratio with the appropriate algorithm and its parameters. After determining the potential relationship, it is necessary to develop a tool that uses deep learning algorithms for SFP and, possibly, for other_else.

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HAZARD IDENTIFICATION AND DIRECTION USING MACHINE LEARNING APPROACH

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

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in

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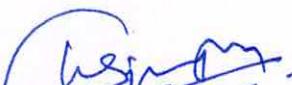
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ABSTRACT

Abstract:

Internet surfing has become a vital part of our daily life. So to catch the attention of the users' different browser vendors compete to set up the new functionality and advanced features that become the source of attacks for the intruder and the websites are put at hazard. However, the existing approaches are not adequate to protect the surfers which require an expeditious and precise model that can be able to distinguish between the begnign or malicious webpages. In this research article, we design a new classification system to analyze and detect the malicious web pages using machine learning classifiers such as, random forest, support vector machine. naïve Bayes, logistic regression and Some special URL (Uniform Resource Locator) based on extricated features the classifiers are trained to predict the malicious web pages. The experimental results have shown that the performance of the random forest classifier achieves better accuracy of 95% in comparison to other machine learning classifiers.

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CONCLUSION

Malicious web page identification is an emerging topic in cybersecurity. Though several research studies have been performed relating to the issues of malicious web page detection these are very costly as they consume more time and resources. In this research article, we employed a new web site classification system based on URL features to predict the web pages as malicious or benign using machine learning algorithms. The machine learning classifiers Random Forest(RF) achieves a higher accuracy of 95%. The experimental results have shown that our method can perform effectively for detecting the malicious web page. In future work, it has been planned to expand the feature sets and analysis using various souces of data to enhance the classifier performance.

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IDENTIFICATION OF PLANTS LEAF DISEASES USING MACHINE LEARNING ALGORITHM

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

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ABSTRACT

Today, smartphones with high-quality built-in camerasare very common. People prefer to take pictures fromdocuments with smartphones instead of scanning them witha scanner. Due to the limitation of scanners input size, it isdifficult to scan everything with them. Resolution and quality ofsmartphone cameras are not enough to take a picture from largédocuments like posters. In this paper, we proposed a pipeline tomake a high-resolution image of a document from its capturedvideo.We suppose that during the record of the video, the camerawas moved slowly all over the surface of the document from aclose distance. In the proposed method we find the location ofeach frame in the document and we use a sharpness criterion toselect the highest possible quality for each region of the documentamong all available frames. We evaluated our method on theSmartDoc Video dataset and reported the promising results
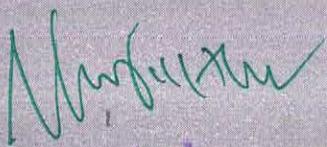
CONCLUSION

The proposed method of approaching is a precious approach, which can be give better performance. K mean algorithm didn't work well in global cluster and it does not work well with cluster of different data size and different data density. So that after clustering if we give the clusters in the multiple SVM class then it is give better classification. In the performance analysis this hybrid algorithm is better than individual algorithms performance. In this method it is found that big amount of dataset can be easily trained and tested to predict the different diseases. Now in daily life, this kind of approached is very useful. In the agriculture medical fields it will very helpful because using this proposed system very minimal amount of pesticides can be used to the plants.

FUTUREWORK:

Future work can be developing the algorithm better segmented techniques. So there is a scope of improvement in the techniques.

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DETECTION OF CYBER ATTACKS IN NETWORK USING MACHINE LEARNING

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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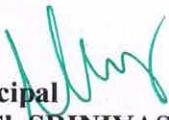
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ABSTRACT

Cybersecurity continues to be a serious issue for any sector in the cyberspace as the number of security breaches is increasing from time to time. It is known that thousands of zero-day attacks are continuously emerging because of the addition of various protocols mainly from Internet of Things (IoT). Most of these attacks are small variants of previously known cyber-attacks. This indicates that even advanced mechanisms such as traditional machine learning systems face difficulty of detecting these small mutants of attacks over time. On the other hand, the success of deep learning (DL) in various big data fields has drawn several interests in cybersecurity fields. The application of DL has been practical because of the improvement in CPU and neural network algorithms aspects.

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CONCLUSION

The industrial IoT based network is rapidly growing in the coming future. The detection of software piracy and malware threats are the main challenges in the field of cybersecurity using IoT-based big data. We proposed a combined deep learning-based approach for the identification of pirated and malware files. First, the TensorFlow neural network is proposed to detect the pirated features of original software using software plagiarism. We collected 100 programmers' source codes files from GCJ to investigate the proposed approach. The source code is preprocessed to clean from noise and to capture further the high-quality features which include useful tokens.
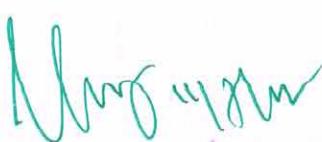
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AN AUTOMATIC GARBAGE CLASSIFICATION SYSTEM BASED ON DEEP LEARNING

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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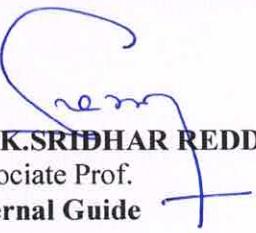
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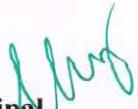
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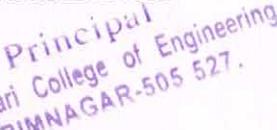
ABSTRACT

An Automatic Garbage classification System has always been an important issue in environmental protection, resource recycling and social livelihood. In order to improve the efficiency of front-end garbage collection, an automatic garbage classification system is proposed based on deep learning. Firstly, the overall system of the garbage bin is designed, including the hardware structure and the mobile app. Secondly, the proposed garbage classification algorithm is based on ResNet-34 algorithm, and its network structure is further optimized by three aspects, including the multi feature fusion of input images, the feature reuse of the residual unit, and the design of a new activation function. Finally, the superiority of the proposed classification algorithm is verified with the constructed garbage data. The classification accuracy of the proposed algorithm is enhanced by 1.01%. The experimental results show that the classification accuracy is as high as 99%, the classification cycle of the system is as quick as 0.95 s.
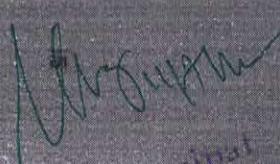
A MACHINE LEARNING BASED LIGHTWEIGHT INTRUSION DETECTION SYSTEM FOR THE INTERNET OF THINGS

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

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ABSTRACT

The Internet of Things (IoT) is vulnerable to various attacks, due to the presence of tiny computing devices. To enhance the security of the IoT, this paper builds a lightweight intrusion detection system (IDS) based on two machine learning techniques, namely, feature selection and feature classification. The feature selection was realized by the filter-based method, thanks to its relatively low computing cost. The feature classification algorithm for our system was identified through comparison between logistic regression (LR), naive Bayes (NB), decision tree (DT), random forest (RF), k-nearest neighbor (KNN), support vector machine (SVM) and multilayer perceptron (MLP). Finally, the DT algorithm was selected for our system, owing to its outstanding performance on several datasets. The research results provide a guide on choosing the optimal feature selection method for machine learning.
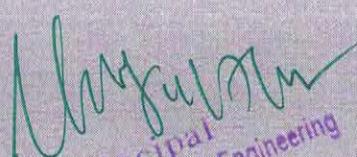
8. CONCLUSION

Internet of Things is increasingly used and many related applications appeared. However, the IoT is faced with a security problem that needs to be solved, while considering the constraints and challenges related to the IoT context. In this paper, we have proposed a lightweight intrusion detection model based on machine learning techniques. This model can detect new attacks and provide double protection to the IoT nodes against internal and external attacks. In order to find the best classifier model, we evaluated several machine learning classifier models using three lightweight feature selection algorithms and tried to optimize the parameters of each algorithm to get an efficient classifier model with high accuracy and precision, as well as low false negative. In the experiments, we used KDD99, NSL-KDD and UNSW-NB15 dataset to learn and evaluate our model. According to the results of our study, it is observed that DT and KNN performed better than the other algorithms; however, the KNN takes much time to classify compared to the DT algorithm. Furthermore, with the three correlation methods used to reduce datasets dimension such as PCC, SCC and KTC, the classifiers produce good performance when the threshold of the correlation coefficient is greater than 0.9; below this threshold, performances are poor and sometimes unacceptable. In the case of the datasets that relate to the extent of our study area, it is found that the performance obtained on the NSL-KDD dataset is better compared to the KDD99 and UNSW-NB15 datasets..

FUTURE SCOPE

In Future Work we will study other feature selection methods combined with more machine learning algorithms applied to real-time data from IoT devices.

ANALYSIS AND PREDICTION OF INDUSTRIAL ACCIDENTS USING MACHINE LEARNING

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ABSTRACT

With the different businesses in today's environment, there is a huge development in the measure of information being created from various sources. With this tremendous measure of information being generated day by day, there is a requirement for the information to be investigated and be managed methodically. There has been an increase in the number of accidents ever since the evolution of such industries. Even with the diverse industrial safety and accident prevention systems available, they haven't been efficient in managing a wide range of parameters and be able to effectively predict them by handling a large amount of data. Moreover, with the existing systems, the cost of planning and storing the data is soaring. In this research, a conceptual system is made that utilizes low cost storage and process data in less time. It additionally utilizes Machine Learning, NLP and Random Forest calculation so as to comprehend and foresee mishaps in Industrial condition. The industrial data is procured from one of the largest industries in Brazil and the world which records the industrial accidents that took place in every nation. The information is investigated and prepared with Machine Learning algorithm so as to comprehend the reasons for such incidents and how the expectation of future accidents can be done. Subsequently, the framework can think about an assortment of parameters and decide future happenings with exactness.

7. CONCLUSION

The system that was proposed was in an aim to analyze and create predictions of Industrial accidents from a publicly provided dataset. Using the dataset, the system was able to read the data, clean the data, produce various analyses and statistics along with making predictions based on the model it was trained with. With the use of Random Forest Classifier, it can be depicted that it is comparatively a better algorithm than by using single trees. The system can be used for any industry and this can also be mean to help industries in getting to know better about the fatalities that occur. Also, the system aids in understanding the data and result out a prediction so as to ensure in keeping the employees safer from any further happenings. 1. Lack of valuable data: A machine learning algorithm often requires tens ohfoutsands aotfad [35] to be trained in order to get an effective model. The acquisition of these basic data often requires manual operations and the speed cannot be guaranteed.

FUTURE SCOPE

In future enhancement we will add some more algorithms to predict efficiently.
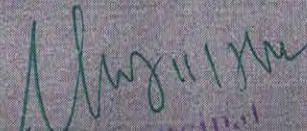
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WEAPON DETECTION USING ARTIFICIAL INTELLIGENCE AND DEEP LEARNING FOR SECURITY APPLICATIONS

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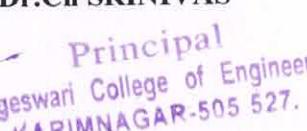
ABSTRACT

Security is always a main concern in every domain, due to a rise in crime rate in a crowded event or suspicious lonely areas. Abnormal detection and monitoring have major applications of computer vision to tackle various problems. Due to growing demand in the protection of safety, security and personal properties, needs and deployment of video surveillance systems can recognize and interpret the scene and anomaly events play a vital role in intelligence monitoring. This paper implements automatic gun (or) weapon detection using a convolution neural network (CNN) based SSD and Faster RCNN algorithms. Proposed implementation uses two types of datasets. One dataset, which had pre-labelled images and the other one is a set of images, which were labelled manually. Results are tabulated, both algorithms achieve good accuracy, but their application in real situations can be based on the trade-off between speed and accuracy.

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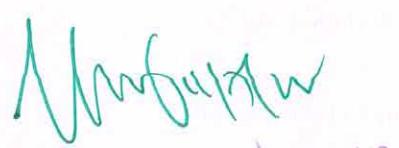
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CONCLUSION

In this research paper, Comparative analysis have been made for the two versions of the state of the art object detection algorithm known as YOLOV4 and YOLOV3. We have done a fact-finding comparative analysis for a weapons detection task. We take the beginning from the outline of both the versions, take a look at the architecture and improvements of the preceding versions. From that point onward, we made a comparative analysis with the assistance of an independent self-made weapons dataset. Dataset was divided into the training set and testing set, both the versions trained on that dataset and furthermore measure the performance on a given dataset. The performance is estimated on the basis of given parameters e.g Precision, Recall, F1 Score, Quality, mAP, and so on. We have demonstrated that YOLOV4 performance is obviously superior to YOLOV3 and highlight the things behind the improvement. This comparison gives the researchers a super arrangement to see things profoundly and give the information that how the little changes give better outcomes. For future work we will build the measure to increase the images in our dataset and furthermore increment the measure of classes to extend the detection of weapons.

FACIAL EMOTION RECOGNITION OF STUDENTS USING CONVOLUTIONAL NEURAL NETWORK

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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BANDARI SREEJA	**(17S41A0515)**
KALIGETI KAVYA	**(17S41A0542)**
KOTAGIRI SHRAVANI	**(17S41A0547)**

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This is certify to that the major project report entitled **ANALYSIS AND PREDICTION OF INDUSTRIAL ACCIDENTS 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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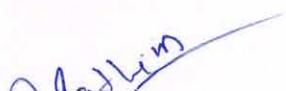
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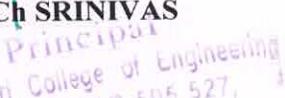
ABSTRACT

Facial expression recognition has been an active research area in the past 10 years, with growing application areas including avatar animation, neuromarketing and sociable robots. The recognition of facial expressions is not an easy problem for machine learning methods, since people can vary significantly in the way they show their expressions. Even images of the same person in the same facial expression can vary in brightness, background and pose, and these variations are emphasized if considering different subjects (because of variations in shape, ethnicity among others). Although facial expression recognition is very studied in the literature, few works perform fair evaluation avoiding mixing subjects while training and testing the proposed algorithms. Hence, facial expression recognition is still a challenging problem in computer vision. In this work, we propose a simple solution for facial expression recognition that uses a combination of Convolutional Neural Network and specific image pre-processing steps. Convolutional Neural Networks achieve better accuracy with big data. However, there are no publicly available datasets with sufficient data for facial expression recognition with deep architectures. Therefore, to tackle the problem, we apply some pre-processing techniques to extract only expression specific features from a face image and explore the presentation order of the samples during training. The experiments employed to evaluate our technique were carried out using three largely used public databases (CK+, JAFFE and BU-3DFE). A study of the impact of each image pre-processing operation in the accuracy rate is presented.

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CONCLUSION

Expression prediction is performed by two ways: 1) learning linear support vector machine classifiers using the 32-dimensional fused deep features, or 2) directly performing softmax prediction using the six-dimensional expression probability vectors. Different from existing 3D FER methods, DF-CNN combines feature learning and fusion learning into a single end-to-end training framework. To demonstrate the effectiveness of DF-CNN, we conducted comprehensive experiments to compare the performance of DFCNN with handcrafted features, pre-trained deep features, finetuned deep features, and state-of-the-art methods on three 3D face datasets (i.e., BU-3DFE Subset I, BU-3DFE Subset II, and Bosphorus Subset). In all cases, DF-CNN consistently achieved the best results. To the best of our knowledge, this is the first work of introducing deep CNN to 3D FER and deep learning-based featurelevel fusion for multimodal 2D+3D FER.

SPAM DETECTION FOR YOUTUBE COMMENTS

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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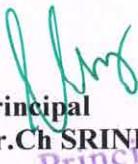
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ABSTRACT

In the recently advanced society, online social media sites like YouTube, Twitter, Facebook, LinkedIn, etc are very popular. People turn to social media for interacting with other people, gaining knowledge, sharing ideas, for entertainment and staying informed about the events happening in the rest of the world. Among these sites, YouTube has emerged as the most popular website for sharing and viewing video content. However, such success has also attracted malicious users, which aim to self-promote their videos or disseminate viruses and malware. These spam videos may be unrelated to their title or may contain pornographic content. Therefore, it is very important to find a way to detect these videos and report them. In this work, we have evaluated several top-performance classification techniques for such purpose. The statistical analysis of results indicates that the Multilayer Perceptron and Support
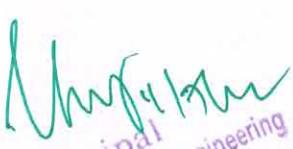
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Conclusion

The goal of this research was to find capable methods and settings that could be used to help the detection of spam comments on YouTube. with the Deep neural network-based implementations such as convolutional recurrent neural networks, may obtain better accuracy results for detecting unwanted Youtube Comments.

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MUSIC AND MOVIE RECOMMENDATION SYSTEMS

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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ABSTRACT

Like in many other research areas, deep learning (DL) is increasingly adopted in music recommendation systems (MRS). With the advent of the World Wide Web, it has captured and accumulated 'Word-of-Mouth (WoM)' such as reviews, comments, user ratings, and etc., about cultural contents including movies. We paid attention to WoM's role as cultural metadata. 'Recommendation systems' are services which recommend users new items such as news articles, books, music, and movies they would like. We developed a simple and low-cost movie recommendation system harnessing vast cultural metadata, about movies, existing on the Web. Then we evaluated the system, and analyzed its strength. The discussion is structured according to the dimensions of neural network type, input data, recommendation approach (content-based filtering, collaborative filtering, or both), and task (standard or sequential music recommendation). In addition, we discuss major challenges faced in MRS, in particular in the context of the current research on deeplearning.

6. CONCLUSION AND FUTURE ENHANCEMENT

This recommendation system recommends different movies and music to users. Since this system is based on a collaborative approach, it will give progressively explicit outcomes contrasted with different systems that are based on the content-based approach. Content-based recommendation systems are constrained to people, these systems don't prescribe things out of the box. These systems work on individual users' ratings, hence limiting your choice to explore more. While our system which is based on a collaborative approach computes the connection between different clients and relying upon their ratings, prescribes movies and music to others who have similar tastes, subsequently allowing users to explore more.

RISK ANALYSIS ON GENETIC DISEASE USING ML

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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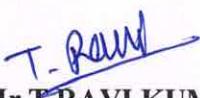
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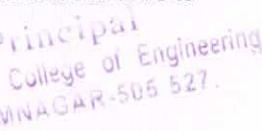
ABSTRACT

These cancer genetic counseling recommendations describe the medical, psychosocial and ethical implications of identifying at-risk individuals for hereditary breast and ovarian cancer (HBOC) through cancer risk assessment, with or without genetic susceptibility testing. They were developed by members of the Practice Issues Subcommittee of the National Society of Genetic Counselors' Familial Cancer Risk Counseling Special Interest Group. The information contained in this document is derived from extensive review of the current literature on cancer genetic risk assessment as well as the professional expertise of genetic counselors with significant experience in education and counseling regarding hereditary breast and ovarian cancer. Critical components of the process include the ascertainment of medical and family histories, determination and communication of cancer risk, assessment of risk perception, education regarding the genetics of HBOC, discussion of molecular testing for HBOC if appropriate (including benefits, risks and limitations) and any necessary follow-up. These recommendations do not dictate an exclusive course of management or guarantee a specific outcome. Moreover, they do not replace the professional judgment of a health care provider based on the clinical situation of a client.

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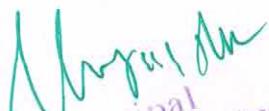
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CONCLUSION

The approach looks promising because prediction of pathogenicity of bacterial pathogens prior to phenotypic data will be an important prerequisite to more informed decision making and improved reaction time. Such models will enable the set up of real-time online analysis of whole genome sequence data from L. monocytogenes, which could estimate risk/health burden at the whole-population or strain level. Such models/tools could both improve food safety and reduce the number of unnecessary withdrawals of food contaminated with non/low-pathogenic strains. Additionally, early detection of the evolution of new pathogenic strains, which lead to new threats, will support timely outbreak detection and decision making. For instance, this study indicates that the InlF gene is truncated among a specific subpopulation of L. monocytogenes that could explain reduced illness frequency of those strains. The role of the truncated InlF protein in attenuating the ability of L. monocytogenes to adhere to host cells resulting in decreased virulence needs to be further investigated.
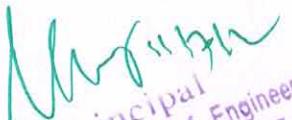
STOCK MARKET PREDICTION USING KNN

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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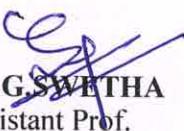
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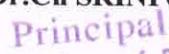
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ABSTRACT

In financial applications, stock-market trend prediction has long been a popular subject. In this research, we develop a new predictive model to improve the accuracy by enhancing the denoising process which includes a training set selection based on four K-nearest neighbour (KNN) classifiers to generate a more representative training set and a denoising autoencoder-based deep architecture as kernel predictor. Considering the good agreement between closing price trends and daily extreme price movements, we forecast extreme price movements as an indirect channel for realising accurate price-trend prediction. The experimental results demonstrate the effectiveness of the proposed method in terms of its accuracy compared with traditional machine-learning models in four principal Chinese stock indexes and nine leading individual stocks from nine different major industry sectors.

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CONCLUSION

In this paper, a prediction process for five listed companies on the Jordanian Stock Market was carried out, and is considered to be the first of its type implemented in Jordan as a case study using real data and market circumstances. Consequently, a robust model was constructed for the purpose set out. The data was extracted from five major listed companies on the Jordanian stock exchange, the sample data was used to be our training data set (about 200 records for each company) upon the criteria previously mentioned to apply our model. We adopted an efficient prediction algorithm tool of kNN with k=5 to perform such tests on the training data sets we had. According to the results, kNN algorithm was stable and robust with small error ratio, so the results were rational and reasonable. In addition, depending on the actual stock prices data; the prediction results were close to actual prices. Having such rational results for predictions in specific, and for using data mining techniques in real life; this presents a good indication that the use of data mining techniques could help decision makers at various levels when using kNN for data analysis.

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DISEASE PREDICTION USING MACHINE LEARNING

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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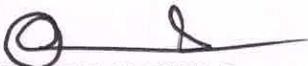
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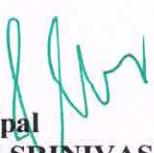
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ABSTRACT

In recent times, Heart Disease prediction is one of the most complicated tasks in medical field. In the modern era, approximately one person dies per minute due to heart disease. Data science plays a crucial role in processing huge amount of data in the field of healthcare. As heart disease prediction is a complex task, there is a need to automate the prediction process to avoid risks associated with it and alert the patient well in advance. This paper makes use of heart disease dataset available in UCI machine learning repository. The proposed work predicts the chances of Heart Disease and classifies patient's risk level by implementing different data mining techniques such as Naive Bayes, Decision Tree, Logistic Regression and Random Forest. Thus, this paper presents a comparative study by analysing the performance of different machine learning algorithms. The trial results verify that Random Forest algorithm has achieved the highest accuracy of 90.16% compared to other ML algorithms implemented.

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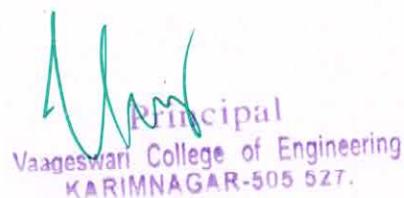
CONCLUSION

With the increasing number of deaths due to heart diseases, it has become mandatory to develop a system to predict heart diseases effectively and accurately. The motivation for the study was to find the most efficient ML algorithm for detection of heart diseases. This study compares the accuracy score of Decision Tree, Logistic Regression, Random Forest and Naive Bayes algorithms for predicting heart disease using UCI machine learning repository dataset. The result of this study indicates that the Random Forest algorithm is the most efficient algorithm with accuracy score of 90.16% for prediction of heart disease. In future the work can be enhanced by developing a web application based on the Random Forest algorithm as well as using a larger dataset as compared to the one used in this analysis which will help to provide better results and help health professionals in predicting the heart disease effectively and efficiently.

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OBJECT TRACKING FROM VIDEO

A major project report submitted in partial fulfillment of the requirementsfor
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in

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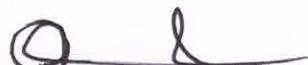
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ABSTRACT

Detecting and tracking objects are among the most prevalent and challenging tasks that a surveillance system has to accomplish in order to determine meaningful events and suspicious activities, and automatically annotate and retrieve video content.

Under the business intelligence notion, an object can be a face, a head, a human, a queue of people, a crowd as well as a product on an assembly line. In this chapter we introduce the reader to main trends and provide taxonomy of popular methods to give an insight to underlying ideas as well as to show their limitations in the hopes of facilitating integration of object detection and tracking for more effective business oriented video analytics.

In this project using python and OPENCV module we are detecting objects from videos and webcam. This application consists of two modules such as 'Browse System Videos' and 'Start Webcam Video Tracking'.
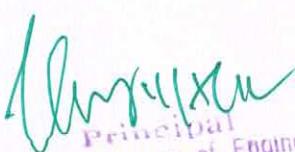
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CHAPTER 7

CONCLUSION

An accurate and efficient object detection system has been developed which achieves comparable metrics with the existing state-of-the-art system. This project uses recent techniques in the field of computer vision and deep learning.

To make the system fully automatic and also to overcome the above limitations, in future, multi- view tracking can be implemented using multiple cameras. Multi view tracking has the obvious advantage over single view tracking because of wide coverage range with different viewing angles for the objects to be tracked.
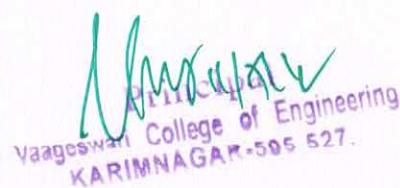
CREDIT CARD FRAUD DETECTION USING RANDOM FOREST &CART ALGORITHM

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

MUDDU SAI KRISHNA	**(17S41A0556)**
GOLLA ARUNDHATHI	**(15S41A0540)**
THIRUNAHARI SAI VINEETH	**(17S41A0593)**
THATIPALLI SAI PRIYA	**(17S41A0591)**

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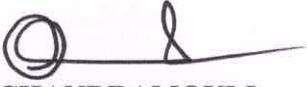
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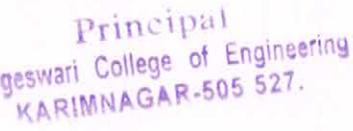
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ABSTRACT

The project is mainly focussed on credit card fraud detection in real world. A phenomenal growth in the number of credit card transactions, has recently led to a considerable rise in fraudulent activities. The purpose is to obtain goods without paying, or to obtain unauthorized funds from an account. Implementation of efficient fraud detection systems has become imperative for all credit card issuing banks to minimize their losses. One of the most crucial challenges in making the business is that neither the card nor the cardholder needsto be present when the purchase is being made. This makes it impossible for the merchant to verify whether the customer making a purchase is the authentic cardholder or not. With the proposed scheme, using random forest algorithm the accuracy of detecting the fraud can be improved can be improved. Classification process of random forest algorithm to analyse data set and user current dataset. Finally optimize the accuracy of the result data. The performance of the techniques is evaluated based on accuracy, sensitivity, and specificity, and precision. Then processing of some of the attributes provided identifies the fraud detection and provides the graphical model visualization. The performance of the techniques is evaluated based on accuracy, sensitivity, and specificity, and precision.

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CONCLUSION

The Random forest algorithm will perform better with a larger number of training data, but speed during testing and application will suffer. Application of more pre-processing techniques would also help. The SVM algorithm still suffers from the imbalanced dataset problem and requires more preprocessing to give better results at the results shown by SVM is great but it could have been better if more preprocessing have been done on the data.

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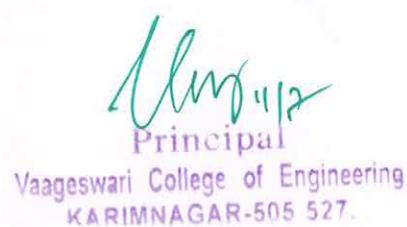
CARTOONING OF AN IMAGE/VIDEO

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

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in

COMPUTER SCIENCE AND ENGINEERING

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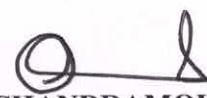
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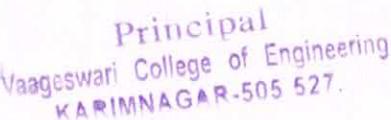
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ABSTRACT

To cartoonize images and different objects blend them accordingly as we require. Our aim is to create an cartoon whoich doesn't look like fifler applied on an image but, is actually a cartoonic view of an input image. In order to get the basic cartoon effect, we just need the bilateral fifler and some edge detection mechanism. We can access this cartoon images throught an application where you can also save them and make changes

CHAPTER -7

CONCLUSION & FUTURE WORK

CONCLUSION

This application is used to create personalised cartoons for an input image and blend them with other images as we require. We can also save the images and use them again later. Using the bilateral filter and edge detection we can create the

Future Work

cartoonized image with following characteristics: Really clear edges and Homogeneous colours. Starting from an original image taken with a camera we're going to give it a cartoon effect keeping in mind these characteristics.
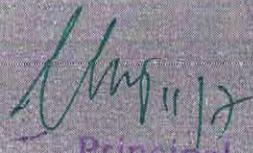
A MACHINE LEARNING MODEL FOR AVERAGE FUEL CONSUMPTION IN HEAVY VEHICLES

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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This is certify to that the major project report entitled **A MACHINE LEARNING MODEL FOR A VERAGEFUEL CONSUMPTION IN HEAVY VEHICLES** 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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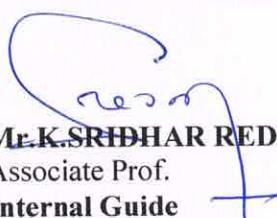
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ABSTRACT

This paper advocates a data summarization approach based on distance rather than the traditional time period when developing individualized machine learning models for fuel consumption. This approach is used in conjunction with seven predictors derived from vehicle speed and road grade to produce a highly predictive neural network model for average fuel consumption in heavy vehicles. The proposed model can easily be developed and deployed for each individual vehicle in a fleet in order to optimize fuel consumption over the entire fleet. The predictors of the model are aggregated over fixed window sizes of distance traveled. Different window sizes are evaluated and the results show that a 1 km window is able to predict fuel consumption with a 0.91 coefficient of determination and mean absolute peak-to-peak percent error less than 4% for routes that include both city and highway duty cycle segments.

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CONCLUSION

This paper presented a machine learning model that can be conveniently developed for each heavy vehicle in a fleet. The model relies on seven predictors: number of stops, stop time, average moving speed, characteristic acceleration, aerodynamic speed squared, change in kinetic energy and change in potential energy. The last two predictors are introduced in this paper to help capture the average dynamic behavior of the vehicle. All of the predictors of the model are derived from vehicle speed and road grade. These variables are readily available from telematics devices that are becoming an integral part of connected vehicles. Moreover, the predictors can be easily computed on-board from these two variables. The model predictors are aggregated over a fixed distance traveled (i.e., window) instead of a fixed time interval. This mapping of the input space to the distance domain aligns with the domain of the target output, and produced a machine learning model for fuel consumption with an RMSE < 0.015 l/100km

INFLUENCES IN SOCIAL NETWORKS

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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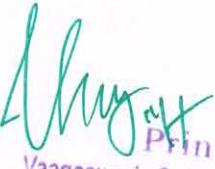
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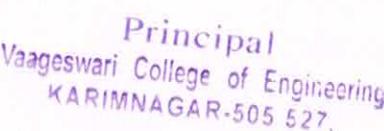
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ABSTRACT

Social networking platforms, such as weibo, WeChat, Twitter and Facebook etc. It have greatly changed people's daily life in the past. Compared with traditional media information dissemination, information dissemination based on social network has the characteristics of simplicity, speed and wide audience. Besides network technology, the influence of social network users is also a major factor. Under the influence, the behavior of a single user implicitly or explicitly affects the behavior of many other users, and may also affect the whole dynamic trend of social network. Therefore, social network influence analysis is one of the important contents of social network research. The this paper will expound the related concepts, mainly summarize the social network influence communication model and evaluation methods, and look into the future of social network influence analysis.

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CONCLUSION

Considering growing number of social networks,as well as number of Internet sites, growing academic network, locally, regionally and globally social networks influence is various and represent a solid basis for further research. Any future research need to include key points of internet – media role, society role, and influence in variety of ways. Doubts on sociability are still present, but not approved. Considering theory of social presence and variety of definitions of social presence, researchers have to question what we know and do not know about social presence.

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CLASSIFYING FAKE NEWS ARTICLES USING NATURAL LANGUAGE PROCESSING TO IDENTIFY IN-ARTICLE ATTRIBUTION AS A SUPERVISED LEARNING ESTIMATOR

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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ABSTRACT

Intentionally deceptive content presented under the guise of legitimate journalism is a worldwide information accuracy and integrity problem that affects opinion forming, decision making, and voting patterns. Most so-called 'fake news' is initially distributed over social media conduits like Facebook and Twitter and later finds its way onto mainstream media platforms such as traditional television and radio news. The fake news stories that are initially seeded over social media platforms share key linguistic characteristics such as making excessive use of unsubstantiated hyperbole and non-attributed quoted content. In this paper, the results of a fake news identification study that documents the performance of a fake news classifier are presented. The Textblob, Natural Language, and SciPy Toolkits were used to develop a novel fake news detector that uses quoted attribution in a Bayesian machine learning system as a key feature to estimate the likelihood that a news article is fake. The resultant process precision is 63.333% effective at assessing the likelihood that an article with quotes is fake. This process is called influence mining and this novel technique is presented as a method that can be used to enable fake news and even propaganda detection. In this paper, the research process, technical analysis, technical linguistics work, and classifier performance and results are presented. The paper concludes with a discussion of how the current system will evolve into an influence mining system.

CONCLUSION

The passive-aggressive classifier performed the best here and gave an accuracy of 93.12%.We can print a confusion matrix to gain insight into the number of false and true negatives and positivesFake news detection techniques can be divided into those based on style and those based on content, or fact-checking. Too often it is assumed that bad style (bad spelling, bad punctuation, limited vocabulary, using terms of abuse, ungrammaticality, etc.) is a safe indicator of fake news.More than ever, this is a case where the machine's opinion must be backed up by clear and fully verifiable indications for the basis of its decision, in terms of the facts checked and the authority by which the truth of each fact was determined.Collecting the data once isn't going to cut it given how quickly information spreads in today's connected world and the number of articles being churned out.I hope you might find this helpful.

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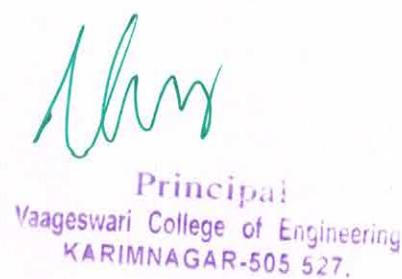
ANALYSIS OF WOMEN SAFETY IN INDIAN CITIES USING MACHINE LEARNING ON TWEETS

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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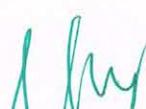
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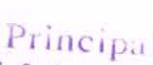
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ABSTRACT

Nowadays women are experiencing lots of violence such as harassment in places in several cities. This starts from stalking which then leads to abusive harassment or also called abuse assault. In this paper we mainly focus on the role of social media which can be used to promote the safety of women in India, given the special reference to the participation of many social media websites or applications such as Twitter, Facebook and Instagram platforms. This paper also focuses on developing the responsibilities among the common people on the various parts of Indian cities so that the safety of women around them is ensured. Tweet on the Twitter application contains the text messages, audio data, video data, images, smiley expressions and hash-tags.

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CONCLUSION

Machine learning algorithm has been discussed throughout the project. For the twitter data that includes millions of tweet and messages every day, machine learning algorithm helps to organize and perform analysis. SPC algorithm, linear algebraic are some of the algorithms which are effective in analyzing the large data that provide categorization and convert into meaningful datasets. Hence we can perform machine learning algorithms to achieve sentimental analysis and bring more safety to women by spreading the awareness.

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USE OF ARTIFICIAL NEURAL NETWORKS TO IDENTIFY FAKE PROFILES

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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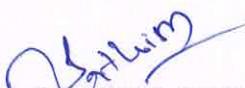
Dr.N.CHANDRAMOULI
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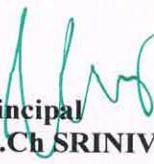
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ABSTRACT

In this project using Artificial Neural Networks we are identifying whether given account details are from genuine or fake users. ANN algorithm will be trained with all previous users fake and genuine account data and then whenever we gave new test data then that ANN train model will be applied on new test data to identify whether given new account details are from genuine or fake users.

Online social networks such as Facebook or Twitter contains users details and some malicious users will hack social network database to steal or breach users information, To protect users data we are using ANN Algorithm.

To train ANN algorithm we are using below details from social networks

All fake users main intention is to send friend request to normal users to hack their machine or to steal their data and never they will have many number of posts or have many following friends and their account age also will have less number of years. By analysing this features Facebook will mark whether user profile is fake or genuine. This Facebook profile data we downloaded from Facebook website and using this data to train ANN model. Below are some values from profile dataset.

Account_Age, Gender, User_Age, Link_Desc, Status_Count, Friend_Count, Location, Location_IP, Status

Module Details:

Admin Module: Admin will login to application by using username as 'admin' and password as 'admin' and then perform below actions.

a) Generate ANN Train Model: Admin will upload profile dataset to ANN algorithm to build train model. This train model can be used to predict fake or genuine account by taking new account test data.

b) View ANN Train Dataset: Using this module admin can view all dataset used to train ANN model.

User Module: Any user can use this application and enter test data of new account and call ANN algorithm. ANN algorithm will take new test data and applied train model to predict whether given test data contains fake or genuine details.

CHAPTER 7
CONCLUSION & FUTURE WORK

CONCLUSION

In this project, we use machine learning, namely an artificial neural network to determine what are the chances that a friend request is authentic are or not. Each equation at each neuron (node) is put through a Sigmoid function. We use a training data set by Facebook or other social networks. This would allow the presented deep learning algorithm to learn the patterns of bot behavior by backpropagation, minimizing the final cost function and adjusting each neuron's weight and bias. In this project, we outline the classes and libraries involved. We also discuss the sigmoid function and how are the weights determined and used. We also consider the parameters of the social network page which are the most important to our solution.

Future Work

Each input neuron would be a different, previously chosen feature of each profile converted into a numerical value (e.g., gender as a binary number, female 0 and male 1) and if needed, divided by an arbitrary number (e.g., age is always divided by 100) to minimize one feature having more influence on the result than the other. The neurons represent nodes. Each node would be responsible for exactly one decision-making process

ABSTRACT

A MACHINE LEARNING MODEL FOR AVERAGE FUEL CONSUMPTION IN HEAVY VEHICLES

In this project, we have used vehicle traveled distance rather than the traditional period when developing individualized machine learning models for fuel consumption. This approach is used in conjunction with seven predictors derived from vehicle speed and road grade to produce a highly predictive neural network model for average fuel consumption in heavy vehicles. The proposed model can easily be developed and deployed for each vehicle in a fleet to optimize fuel consumption over the entire fleet. The predictors of the model are aggregated over fixed window sizes of distance traveled. Different window sizes are evaluated and the results show that a 1km window can predict fuel consumption with a 0.91 coefficient of determination and mean absolute peak-to-peak percent error less than 4% for routes that include both city and highway duty cycle segments.

PROPOSED SYSTEM:

As mentioned above Artificial Neural Networks (ANN) is often used to develop digital models for complex systems. The models proposed highlight some of the difficulties faced by machine learning models when the input and output have different domains. In this study, the input is aggregated in the time domain over 10 minutes intervals and the output is fuel consumption over the distance traveled during the same period. The complex system is represented by a transfer function $F(p) = o$, where $F(\cdot)$ represents the system, prefers to the input predictors and o is the response of the system or the output. Training is an iterative process and can be performed using multiple approaches including particle swarm optimization and back propagation. Other approaches will be considered in future work to evaluate their ability to improve the model's predictive accuracy. Each iteration in the training selects a pair of (input, output) features from Ftr at random and updates the weights in the network. This is done by calculating the error between the actual output value and the value predicted by the model.

# CHAPTER 7
CONCLUSION & FUTURE WORK

CONCLUSION

Machine learning model that can be conveniently developed for each heavy vehicle in a fleet. The model relies on seven predictors: number of stops, stop time, average moving speed, characteristic acceleration, aerodynamic speed squared, change in kinetic energy and change in potential energy. The last two predictors are introduced in this project to help capture the average dynamic behavior of the vehicle. All of the predictors of the model are derived from vehicle speed and road grade.

These variables are readily available from telematics devices that are becoming an integral part of connected vehicles. Moreover, the predictors can be easily computed on-board from these two variables.

FUTURE WORK

In this project author is describing concept to predict average fuel consumption in heavy vehicles using Machine Learning Algorithm such as ANN (Artificial Neural Networks). To predict fuel consumption author has extracted 7 predictor features from heavy vehicle dataset.
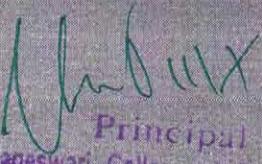
FACE MASK DETECTION

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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CHALLURI DHEENA	**(18S45A0502)**
TAMMISHETTI NIKHIL	**(18S45A0509)**
KOLLAPU SRIVANI	**(15S41A0557)**

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ABSTRACT

The COVID-19 pandemic is causing a worldwide emergency in healthcare. This virus mainly spreads through droplets which emerge from a person infected with coronavirus and poses a risk to others. The risk of transmission is highest in public places. One of the best ways to stay safe from getting infected is wearing a face mask in open territories as indicated by the World Health Organization (WHO). In this project, we propose a method which employs TensorFlow and OpenCV to detect face masks on people. A bounding box drawn over the face of the person describes weather the person is wearing a mask or not. If a person's face is stored in the database, it detects the name of the person who is not wearing face mask and an email will be sent to that person warning them that they are not wearing a mask so that they can take precautions.

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CONCLUSION

Due to the urgency of controlling COVID-19, the application value and importance of real-time mask and social distancing detection are increasing. This work reviewed, firstly, many research works that seek to surround COVID-19 outbreak. Then, it clarified the basic concepts of deep CNN models. After that, this paper reproduced the training and testing of the most used deep pretrained-based CNN models (DenseNet, InceptionV3, MobileNet, MobileNetV2, ResNet-50, VGG-16, and VGG-19) on the face mask dataset. Finally and after evaluated the numerical results, best models are tested on an embedded vision system consisted of Raspberry Pi board and webcam where efficient real-time deep learning-based techniques are implemented with a social distancing task to automate the process of detecting masked faces and violated or maintained distance between peoples.

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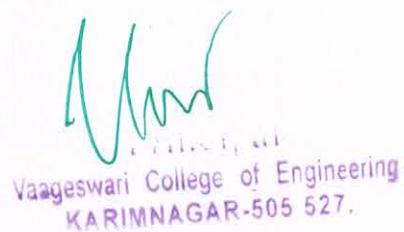
SPAMMER DETECTION AND FAKE USER IDENTIFICATION ON SOCIAL NETWORK

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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ABSTRACT

Social networking sites engage millions of users around the world. The users' interactions with these social sites, such as Twitter and Facebook have a tremendous impact and occasionally undesirable repercussions for daily life. The prominent social networking sites have turned into a target platform for the spammers to disperse a huge amount of irrelevant and deleterious information. Twitter, for example, has become one of the most extravagantly used platforms of all times and therefore allows an unreasonable amount of spam. Fake users send undesired tweets to users to promote services or websites that not only affect legitimate users but also disrupt resource consumption. Moreover, the possibility of expanding invalid information to users through fake identities has increased that results in the unrolling of harmful content. Recently, the detection of spammers and identification of fake users on Twitter has become a common area of research in contemporary online social Networks (OSNs). In this paper, we perform a review of techniques used for detecting spammers on Twitter. Moreover, a taxonomy of the Twitter spam detection approaches is presented that classifies the techniques based on their ability to detect: (i) fake content, (ii) spam based on URL, (iii) spam in trending topics, and (iv) fake users. The presented techniques are also compared based on various features, such as user features, content features, graph features, structure features, and time features. We are hopeful that the presented study will be a useful resource for researchers to find the highlights of recent developments in Twitter spam detection on a single platform.

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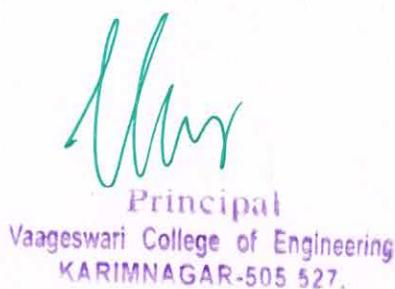
CONCLUSION

We conducted a review of approaches for detecting spammers on Twitter in this research. Furthermore, we proposed a taxonomy of Twitter spam detection strategies, dividing them into four categories: fake content identification, URLbased spam detection, spam identification in hot topics, and false user detection strategies. We also examined the offered strategies based on a variety of factors, including user characteristics, content characteristics, graph characteristics, structural characteristics, and temporal characteristics. Furthermore, the strategies were compared in terms of the aims they were designed to achieve and the datasets they employed. The given review is expected to aid academics by providing a comprehensive source of information on state-of-the-art Twitter spam detection systems.

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CRIME PREDICTION AND ANALYSIS USING MACHINE LEARNING

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

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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ABSTRACT

Crime is one of the biggest and dominating problem in our society and its prevention is an important. task. Daily there are huge numbers of crimes committed frequently. This require keeping track of all the crimes and maintaining a database for same which may be used for future reference. The current problem faced are maintaining of proper dataset of crime and analyzing this data to help in predicting and solving crimes in future. The objective of this project is to analyze dataset which consist of numerous crimes and predicting the type of crime which may happen in future depending upon various conditions. In this project, we will be using the technique of machine learning and data science for crime prediction of Chicago crime data set. The crime data is extracted from the official portal of Chicago police. It consists of crime information like location description, type of crime, date, time, latitude, longitude. Before training of the model data preprocessing will be done following this feature selection and scaling will be done so that accuracy obtain will be high. The K-Nearest Neighbor (KNN) classification and various other algorithms will be tested for crime prediction and one with better accuracy will be used for training. Visualization of dataset will be done in terms of graphical representation of many cases for example at which time the criminal rates are high or at which month the criminal activities are high. The soul purpose of this project is to give a jest idea of how machine learning can be used by the law enforcement agencies to detect, predict and solve crimes at a much faster rate and thus reduces the crime rate. It not restricted to Chicago, this can be used in other states or countries depending upon the availability of the dataset

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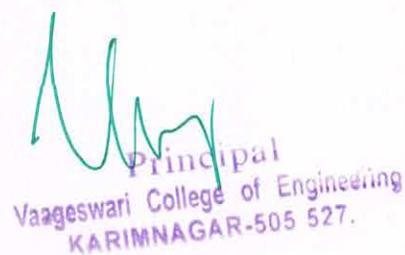
CONCLUSION

With the help of machine learning technology, it has become easy to find out relation and patterns among various data's. The work in this project mainly revolves around predicting the type of crime which may happen if we know the location of where it has occurred. Using the concept of machine learning we have built a model using training data set that have undergone data cleaning and data transformation. The model predicts the type of crime with accuracy of 0.789. Data visualization helps in analysis of data set. The graphs include bar, pie, line and scatter graphs each having its own characteristics. We generated many graphs and found interesting statistics that helped in understanding Chicago crimes datasets that can help in capturing the factors that can help in keeping society safe.