

A CROP PEST CLASSIFICATION USING DEEP LEARNING TECHNIQUES

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ABSTRACT:

This project provides a pest identification system to classify crops beneficial and harmful pests. For that purpose, the project first provides a detailed description of the available pest-identification techniques along with their pros and cons.

Based on the investigation, a classification technique is proposed in this project. The proposed pest identification and classification model has been developed using the Convolution Neural Network (CNN).

The model has been trained with a dataset of images of different pests. The system has been tested with a huge amount of data and validated across other traditional classification models. The classification accuracy of the proposed system is measured by 90% that is far more superior to other conventional methods.

Keywords: Pests identification, deep learning, CNN, beneficial pests, harmful pests

INTRODUCTION:

Agriculture, which is considered the backbone of the economy, contributes to the country's economic growth and determines the standard of life. Crop production always depends upon some production elements like pests, fertilizer, or water.

This project talks about the impact of pests on agricultural achievements. For that purpose, it introduces the deep learning technique for identifying as well as classifying the pests into two major categories: the harmful pests and the beneficial. Most of the farmers are not enough educated and lack the knowledge to differentiate the beneficial pests from the harmful ones and so, they kill both pests.



A Deep Learning Approach for Effective Intrusion Detection in Wireless

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ABSTRACT

Security is playing a major role in this Internet world due to the rapid growth of Internet users. The various intrusion detection systems were developed by many researchers in the past to identify and detect the intruders using data mining techniques. However, the existing systems are still able to achieve sufficient detection accuracy when using the data mining. For this purpose, we propose a new intrusion detection system to provide security in data communication by identifying and detecting the intruders effectively in wireless networks. Here, we propose a new feature selection algorithm called conditional random field and linear correlation coefficient-based feature selection algorithm to select the most contributed features and classify them using the existing convolutional neural network. The experiments have been conducted for evaluating the proposed intrusion detection system that achieves 95.84% as overall detection accuracy. The k-fold cross validation has been done for evaluating the performance of the proposed model.

KEY WORDS: Deep learning, CNN, LCF&CRF

1. INTRODUCTION

The rapid growth of computer networking technology is facilitating the comfort in the businesses, organizations and social communities. Simultaneously, different types of Internet security threats kept developing due to the singular rise of various vulnerabilities and attacking techniques. Hence, some security systems should be used for preventing the attacks and to provide the confidentiality as well as the availability of resources and integrity for the Internet communications. To determine and restrict the malicious network traffic, intrusion detection system (IDS) has become the most important network security solution (Liao et al. 2017).

The major advantage of the CNN is (Liao et al. 2017) to reduce the number of selected features that are used to detect the attack types quickly (Wang and Li 2017). This CNN (Nigeyer et al. 2016) has three layers, namely convolutional layer, pooling layer and fully connected layer. Moreover, these layers are shaped to form a complete convolutional architecture. These convolutional layers use more number of kernels/filters for the given input features and generate various feature maps in the process. In addition, the pooling layer of CNN is used to shorten the dimensions of the feature map to reduce the processing time. Finally, the fully connected layer performs the classification process on the extracted features from the convolutional and pooling layers. Here, each node in

A hybrid clustering and classification model for chemical code based medical disease prediction

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Abstract:

As the number of biomedical documents and medical datasets are increasing in size and dimensions, finding an essential key ICD based disease terms are difficult to extract in large training databases. Most of the traditional approaches use static ICD code extraction for the medical disease classification process. In this paper, a hybrid ICD-Disease clustering-based classification approach is designed and implemented on the large datasets. In this work, a hybrid graph-based clustering algorithm is implemented in order to optimize the data clustering operation for the classification problem. Finally, a weighted neural network is applied on the clustered features for classification process. Experimental results show that the present model has high computational efficiency than the conventional models.

Keywords: neural network, clustering, classification, medical datasets.

1.Introduction

Most of the multi-layer perceptron (MLP) is made up of three layers—input layer, hidden layer, and output layer. The hidden unit nodes have nonlinear activation functions and linear activation functions are available at the output. Every original input layer is multiplied by a weight that is transferred to the other layers. Reinforcement learning (RL) is a precursor to deep learning, replacing many traditional algorithms of learning. Reinforcement Learning (RL) has evolved to compute with other disciplines like game theory, operation research, multi-agent systems. The main difference between classical methods and RL is that knowledge is not assumed by the user and it is never dependent on infallible solutions. With hardware requirements, the technical requirements for ANN-based machine learning are met. With the support of hardware enhancement, the deep models made ANN have transformed ANN into DNN (Deep Learning Neural Network).

Clustering is one of the vital tool in learning and knowledge discovery. Diverse and active amounts of data collected in databases cluster analysis has been recently become a high-tech science in determining. Mostly K-means cluster method is used to group related data together. But,

it requires a number of input to be specified in advance, which is considered to be one of the problems of traditional. This fully automatic clustering method in turn, allows one to determine hidden similarities and key concepts. It also summarizes a large amount of information into small number of clusters. Therefore, biomedical literature has become more complicated for understanding. Thus, there is a necessity of more efficient approaches in order to extract biomedical information from vast numbers of sources. An appropriate mining approach is required to be implemented in order to discover different types of knowledge from biomedical literature. In biomedical texts we can find a degree of term variation. Apart from this, biomedical terms can contain numbers, capital letters, made words, hyphen and different special characters.

A group of researchers developed an advanced all-path kernel technique in order to retrieve PPIs depending upon several lexical and syntactical features. In the subsequent time, approaches those depend upon deep neural network such as convolutional neural networks and recurrent neural networks term became more popular and widely accepted. In case of support vector machine, we have to select the neighboring word features, bag-of-words features, distance features, keywords features and shortest-path features. In case of CNN-based approach, sentence sequence and shortest dependency paths are the inputs. But in case of RNN-based approach, there is only one input that is sentence sequence. The word, part of speech, position and embeddings are considered as the input representation in case of CNN and RNN schemes. At last, the majority voting scheme is implemented in SVM, CNN and RNN schemes. Some other researchers combined RNN and CNN approaches in order to perform an extended and advanced hybrid approach. We can mention here that, the inputs for this model are sentence sequences and SDFs produced from the dependency graph. The process of relation extraction is considered as the most important category of knowledge discovery. The most common and prime objective of all researchers is to detect relationships in between different biomedical concepts. Different numbers of approaches are implemented in the biomedical relation extraction process, such as co-occurrence statistics, rule-based techniques, pattern learning and classification. Some of the mostly used text mining processes are named entity recognition, text classification systems and abbreviation extraction, relationship extraction and hypothesis generation. The named entity recognition process has the responsibility to detect particular nouns just like gene, protein, drug, chemical use of vast range of text. The process of text classification can be defined as a specific process that can automatically identify importance of a particular document. Apart from all of

A SCIENTIFIC APPROACH FOR GENERATION OF RANDOM FIELDS FOR IMAGE ENHANCEMENT AND RECONSTRUCTION

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ABSTRACT

Noise Suppression from images is one of the most important concerns in digital image processing. Impulsive noise is one such noise, which may corrupt images during their acquisition or transmission or storage etc. A variety of techniques are reported to remove this type of noise. It is observed that techniques which follow the two stage process of detection of noise and filtering of noisy pixels achieve better performance than others. In this work such schemes of impulsive noise detection and filtering thereof are proposed. Two models of impulsive noise are considered in this work. The first one is *Salt & Pepper Noise* (SPN) model, where the noise value may be either the minimum or maximum of the dynamic gray scale range of the image. And, the second one is *Random Valued Impulsive Noise* (RVIN) model, where the noise pixel value is bounded by the range of the dynamic gray scale of the image. This work deal with SPN model and deal with RVIN model of noise. The first scheme is based on second order difference of pixels in order to identify noisy pixels. The second scheme for SPN model uses fuzzy technique to locate contaminated pixels. The contaminated pixels are then subject to median filtering. This detection-filtration is done recursively so that filtered pixels take part in the detection of noise in the next pixel. In the propose schemes for adaptive threshold selection is emphasizing. Incorporation of adaptive threshold into the noise detection process may be leads to more reliable and

more efficient detection of noise. Based on the noisy image characteristics and their statistics, threshold values are selected. It may be observed, in general, that the proposing schemes are better in suppressing impulsive noise at different noise ratios than their counterparts.

Keywords: cmf,vmf,smf,momf.

Introduction

Noise removal from a contaminated image signal is a prominent field of research and many researchers have suggested a large number of algorithms and compared their results. The main thrust on all such algorithms is to remove impulsive noise while preserving image details. These schemes differ in their basic methodologies applied to suppress noise. Some schemes utilize detection of impulsive noise followed by filtering whereas others filter all the pixels irrespective of corruption. In this section an attempt has been made for a detail literature review on the reported articles and studies their performances through computer simulation. We have classified the schemes based on the characteristics of the filtering schemes. first one is Filtering without Detection. In this type of filtering a window mask is moved across the observed image. The mask is usually of size $(2N+1)^2$ where N is a positive integer. Generally the center element is the pixel of interest. When the mask is moved starting from the left-top corner of the image to the right-bottom



Academic Performance Prediction Based on Multi Source Multi Feature Behavioural Data

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ABSTRACT

Digital data trails from disparate sources covering different aspects of student life are stored daily. In most instances, universities comprise. However, it remains challenging to combine these data to obtain a holistic view of a student. Use these data to accurately predict academic performance, and use such predictions to promote positive student engagement with the university. To initially alleviate this problem, in this article, a model-based Augmented Education (Augment ED) is proposed. In our study, first, an experiment is conducted based on a real-world campus dataset of college students N, that aggregates multi-source behavioural data covering not only online and offline learning but also behaviour inside and outside of the classroom. Specifically, to gain in-depth insight into the features leading to excellent or poor performance, metrics measuring the habit and ambience behavioural changes (e.g., regularity and stability of campus lifestyles) are estimated; furthermore, features representing dynamic changes in temporal lifestyle patterns are extracted by the means of long short-term memory (LSTM). Second, machine learning-based classification algorithms are developed to predict academic performance. Finally, visualized feedback enabling students (especially at-risk students) to potentially optimize their interactions with the university and achieve a study-life balance is designed. The experiments show that the Augment ED model can predict students' academic performance with high accuracy.

1. INTRODUCTION

As an important step to achieving personalized education, academic performance prediction is a key issue in the education data mining field. It has been extensively demonstrated that academic performance can be profoundly affected by the following factors: Student's Potentiality (e.g., motivation, extraversion, and agreeableness), Personal Status (e.g., gender, age, height, weight, physical fitness, cardio-respiratory fitness, aerobic fitness, stress, mood, mental health, intelligence, and executive functions),

Lifestyle Behaviours (e.g., eating, physical activity, sleep patterns, social life, and time management),

Learning Behaviors (e.g., class attendance, study duration, library entry, and online learning)

LITERATURE SURVEY

- Systematic literature review is a literature review method that aims to answer research questions by identifying, assessing, evaluating and interpreting all findings related to the research topic.
- Systematic literature review has proven to be an effective research method to provide an overview of trends in certain research topics, both results,

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ABSTRACT:

Machine learning (ML) makes machines independent and self-learning component. Researchers applying machine learning algorithms to solve various real world problems in various domains. Nowadays agriculture affects by various factors such as global warming, climatic changes, lack of manpower, etc. To help the farmers from the above factors and increase agriculture production, recently many machine learning techniques are utilized in the agricultural field. In this paper, we studied different applications of machine learning techniques in the agriculture domain. We classified applications of machine learning algorithms in agriculture by four categories namely, machine learning in plant monitoring, machine learning in soil analysis, machine learning in detection (or) prediction process in agriculture, machine learning in animal monitoring. We also analysed the important features of machine learning applications in agriculture.

INTRODUCTION:

Nowadays, precision agriculture aims at increasing productivity and maximizing the yields of a crop. The entire crop cycle can benefit from an application of the correct amount of spray (such as water, fertilizers, pesticides or fungicides) at the proper time and place. In parallel, research on multispectral image analysis of agricultural fields is starting to detect diseases in plants. Farmers generate maps of spatial variability based on geo-located sensors. These sensors collect many variables and provide historical and real time information. Recently, Unmanned Aerial Vehicles (UAV) has enabled precision agriculture. These drones are equipped with multispectral or RGB cameras to collect aerial images and create maps of the selected region. High precision agriculture applies mainly to yield monitoring or remote sensing. It is only started to be applied to vineyards on complex landscapes and difficult topographies. To provide better management of vineyards and other cultures, new services are under development around the world. For example, a service for the automatic collection of data related to culture for automatic spotting, designation of zones, and prediction of the evolution of a zone is in preparation. Currently, projects are based on satellites providing high quality images to automatically detect specific zones and generate advanced geographical data. Today, image recognition field massively uses Machine Learning (ML) algorithms, for online images matching or satellite image mapping [5] for example. The current research is based on the needs above and focuses on the detection of the vine and potential disease on images taken by Unmanned Aerial Vehicles (UAV). UAV are used for multiple reasons such as the price and the accessibility of this type of product, compared to satellites. With an auto generated flight plan, the drone can fly over a specifically defined zone of the field, carrying products and spraying it out to the designated area. The present paper will describe how the application of Machine Learning to images taken by a UAV improves the overall performance of automated drone plan generation.

PROPOSED SYSTEM:

The farmers rely on the traditional ways of farming which is based on the reliability of the suggestions from the elderly and their experience. This method leaves farmers at the mercy of random climatic conditions which are already getting random due to global warming and uneven

BIRD SPECIES IDENTIFICATION USING DEEP LEARNING

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ABSTRACT:

Bird watching is a common hobby but to identify their species requires the assistance of bird books. To provide birdwatchers a handy tool to admire the beauty of birds, we developed a deep learning platform to assist users in recognizing 27 species of birds endemic to Taiwan using a mobile app named the Internet of Birds (IoB). Bird images were learned by a convolutional neural network (CNN) to localize prominent features in the images. First, we established and generated a bounded region of interest to refine the shapes and colors of the object granularities and subsequently balanced the distribution of bird species. Then, a skip connection method was used to linearly combine the outputs of the previous and current layers to improve feature extraction. Finally, we applied the softmax function to obtain a probability distribution of bird features. The learned parameters of bird features were used to identify pictures uploaded by mobile users. The proposed CNN model with skip connections achieved higher accuracy of 99.00 % compared with the 93.98% from a CNN and 89.00% from the SVM for the training images. As for the test dataset, the average sensitivity, specificity, and accuracy were 93.79%, 96.11%, and 95.37%, respectively.

Keywords:

Bird image recognition, convolutional neural network, deep learning, mobile app.

BREAST CANCER PREDICTION USING MACHINE LEARNING

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ABSTRACT:

Machine learning is a technology which allows a software program to become more accurate at performing more accurate results without being explicitly programmed and also ML algorithms uses historic data to predict the new outputs.

Because of this ML gets a distinguish attention. Now a day's prediction engine has become so popular that they are generating accurate and affordable predictions just like a human, and being using industry to solve many of the problems.

Breast cancer is one of the most common cancers among women worldwide, representing the majority of new cancer cases and cancer-related deaths according to global statistics, making it a significant public health problem in today's society. The early diagnosis can improve the prognosis and chance of survival significantly, as it can promote timely clinical treatment to patients. Thus, the correct diagnosis of Breast cancer and classification of patients is the subject of much research. Because of its unique advantages in critical features detection from complex Breast Cancer Datasets, machine learning is widely recognized as the methodology of choice in Breast Cancer patients classification and forecast modelling.

Keywords:

Machine Learning, Random Forest Classifier, Model Selection, Classification, Prediction, Supervised Learning

INTRODUCTION:

Breast cancer is a disease in which cells in the breast grow out of control. There are different kinds of breast cancer. The kind of breast cancer depends on which cells in the breast turn into cancer. Breast cancer can begin in different parts of the breast. A breast is made up of three main parts: lobules, ducts, and connective tissue. The lobules are the glands that produce milk. The ducts are tubes that carry milk to the nipple. The connective tissue (which consists of fibrous and fatty tissue) surrounds and holds everything together. Most breast cancers begin in the ducts or lobules. Breast cancer can spread outside the breast through blood vessels and lymph vessels. When breast cancer spreads to other parts of the body, it is said to have metastasized.

Machine learning is one of the applications of artificial intelligence (AI) that provides computers, the ability to learn automatically and improve from experience instead of explicitly programmed. It focuses on developing computer programs that can access data and use it to learn from themselves. The main aim is to allow computers to learn automatically without human intervention and also adjust actions accordingly. Breast

CREDIT CARD TRANSACTION USING FACE RECOGNITION AUTHENTICATION

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ABSTRACT:

This paper proposes a method for credit card transaction system which will integrate with the face detection and face recognition technology using Haar Cascade and GLCM algorithms, respectively. The problem faced by credit card users is vulnerability to lot of privacy issues such as credit card. This may commonly occur when users give their credit card numbers to unfamiliar individuals or when cards are lost. Our solution proposes a technique by which the features extracted from the image checked during the payment made by user on e-commerce portal will be compared to the features from the training dataset of the respective user. Features extracted from the images stored in administrator database acts as the training data set for authentication purpose.

KEYWORDS: Face detection, Haar cascade algorithm, Face recognition, GLCM (Gray Level Co-Occurrence Matrix), E-commerce.

INTRODUCTION

A business can no longer afford not to offer its customers multiple payment options. Credit and debit cards are fast becoming the most common payment mode of big purchasers, pulling more and more businesses towards credit card processing services. A credit card transaction starts with a swipe at a credit card terminal or by the entry of the card details (card-less transaction) into a billing system. Before the amount moves from the card holder's account into your business account, certain validations, checks and deductions are made. All these tasks are managed by the credit card processor.

Credit card processing companies make sure credit card transactions are processed accurately and on time, for a fee. As more and more customers get comfortable with cashless transactions, businesses are pulling all the stops to make credit card transactions secure and painless. Cashless transactions benefit your business. Funds are transferred into your merchant account on time with hardly any effort from your side. The fundamental problem faced by the credit card users is to have a secure online transaction using credit cards. Credit card fraud is the biggest risk in credit card transactions. Credit cards are stolen and used to make large purchases, often leading to heavy losses for the credit card processing service and the business.

The proposed solution provides a method for credit card transaction system which will integrate with the face detection and face recognition technology using Haar Cascade and GLCM algorithms, respectively.

II. RELATED WORK

The credit card transaction is an application where the data given by the user can be traced and accessed over the network, which is a major problem. As the problems stated above motivated us to use the digital image processing that can secure the overall credit card system by using face recognition of the user. Face recognition is a both challenging

[1] and important recognition technique. Among all the biometric techniques, face recognition approach possesses one great advantage, which is its user-friendliness (or non-intrusiveness).

A generic framework for face recognition, factors that may affect the performance of the recognizer, and several state-of-the-art face recognition algorithms have been explained. Face recognition is one of the few biometric methods that possess the merits of both high accuracy and low intrusiveness.

The survey made also explains the ease of using the proposed algorithm and the benefits of face

CRIME TYPE AND OCCURRENCE PREDICTION USING MACHINE LEARNING ALGORITHM

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ABSTRACT:

In this era of recent times, crime has become an evident way of making people and society under trouble. An increasing crime factor leads to an imbalance in the constituency of a country. In order to analyse and have a response ahead this type of criminal activities, it is necessary to understand the crime patterns. This study imposes one such crime pattern analysis by using crime data obtained from Kaggle open source which in turn used for the prediction of most recently occurring crimes. The major aspect of this project is to estimate which type of crime contributes the most along with time period and location where it has happened. Some machine learning algorithms such as XGBoost, KNN is implied in this work in order to classify among various crime patterns and the accuracy achieved was comparatively high when compared to precomposed work.

Keywords:

Crime, Analyse, Crime patterns, Kaggle, Estimate, XGBoost, AdaBoost, Random Forest, KNN, Accuracy.

INTRODUCTION:

A crime is nothing but an action. It constitutes an offense. It's punishable by law. The identification and analysis of hidden crime is a very difficult task for the police department. Also, there is voluminous data of the crime is available. So, there should some methodologies that should help in the investigation. So, the methodology should help to solve the crime. The machine learning approach can better help in the prediction and analysis of the crime. The machine learning approach provides regression algorithms.

The classification techniques provide help to fulfill the purpose of investigation. Regression techniques such as multilinear regression are a statistical method. This method helps to find the relationship between two quantitative values or variables. This approach predicts the values of the dependent variables based on the independent variables. The classifier techniques such as XGBoost, AdaBoost, Random Forest, KNN. These classifiers are used to classify the multiclass target variables. The neural networks are used to improve the accuracy. The neural network has an input layer, dense and has an output layer.

Based on the above algorithms the perpetrator description such as gender, age, and the relationship are predicted. The model is thus expected to help to remove the burden of the police investigation. Thus, it helps to solve homicide cases.



Detection of Cyber Attack in Network using Machine Learning Techniques

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ABSTRACT

The expanded use of cloud administrations, developing number of web applications clients, changes in network framework that interfaces gadgets running versatile working frameworks and continually advancing organization innovation cause novel difficulties for digital security. Traditional techniques for intrusions discovery and profound parcel assessment, while still generally utilized and suggested, are not at this point adequate to satisfy the needs of developing security dangers. As processing power increments and cost drops, Machine Learning is viewed as an elective technique or an extra component to shield system malwares, botnets, and different assaults. The significant commitment of the paper is the suggestion of Machine Learning any to deal with model typical conduct of utilization and to identify digital attacks.

Keywords: Cyber Attack, attack detection, security

1. INTRODUCTION

Computers and IP networks try through illegal access or unlawful use of an asset to exploit, alter, disable, damage, corrupt, or acquire information, an attack is committed. An attack is an aggressive action against computer systems, infrastructures, computer networks or individual computing devices. An intruder is an individual or process who, without authorization and with a possible harmful purpose, seeks access to data, functions or other limited systems areas. Cyber threats may be part of information warfare and cyber warfare depending on circumstances. Sovereign nations, persons, groups, societies, or enterprises might use a cyber-warfare and it could come from an anonymous source. Sometimes a cyber weapon is a product that helps a cyberwarfare by accessing into a

vulnerable system, a cyber threat can steal change or destroy a specific target. Cyber incidents can vary from the installation of malware on a computer to the destruction of whole national infrastructure. Legal scholars try to restrict the usage of the word to physical damage events and differentiate it from more common privacy violations and more comprehensive hacking. Increasingly, crimes and deadly are cyber intrusions.

Types Of Cyber attacks:

Injection attacks

DNS Spoofing

Phishing

Denial of Service

Man in the middle attacks

DETECTION OF FAKE ONLINE REVIEWS BASED ON RANDOM FOREST USING MACHINE LEARNING

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ABSTRACT:

Online reviews are very important in decision making of customer whether to purchase a product or service. These are main source of information getting from the past customer experience about the features of that service which we are going to purchase. This paper introduces some machine learning techniques like Random forest and Decision Tree for sentiment classification of reviews and to detect fake online reviews using the data set of a Hotel reviews. Sentiment Analysis has become most interesting in analysis of text. Using sentiment analysis we can separate negative and positive reviews as well. Online reviews have great impact on today's business and commerce. opinion reviews have an economical impact on the bottom line of businesses. Unsurprisingly, opportunistic individuals or groups have attempted to abuse or manipulate online opinion reviews (e.g., spam reviews) to make profits and so on. Hence, opportunistic individuals or groups try to manipulate product reviews for their own interests.

Keywords: – Spam reviews, machine learning, Random forest Decision Tree algorithm.

INTRODUCTION:

A fake review is a misuse of the user review system by fake personalities. Fake reviews are also generated by bots. Fake reviews mislead customers to take decision on wrong product and the customer spends money on the product. These views can be either positive or negative, to increase the promotion and sale or to bring down the competitive company products. Many people look at online reviews before making a decision whether it should be purchase or not. Many companies depend on several applications to detect Fake reviews using machine learning. In this paper we use Sentiment Analysis to formulate the data. The sentiment is usually formulated as a two-class classification problem, positive and negative. The basis of Sentiment Analysis is detecting the polarity of a give text or document. In this project we are using a set

Detection of Non-Helmet Riders and License Plate Recognition

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ABSTRACT

Motorcycles have always been the primary mode of transport in developing countries. In recent years, there has been a speedy increase in motorcycle accidents owing to the fact that majority of the motor bicyclist fail to wear helmet that makes it an ever-present danger.

Here, to detect the motorcyclists who are violating the helmet laws, a system using Deep Learning and convolutional neural network is implemented where license plate of the motorcycle is detected using OCR if rider fails to wear helmet.

INTRODUCTION

All over the world around 1.35 million lives are lost each year, 50 million people are getting injured due to road accidents, according to a report titled "The Global status report on road safety 2018" released by world health organization. It is very hard to imagine that this burden is unevenly borne by motorcyclists, cyclists and pedestrians. This report noted that a comprehensive action plan has to be set up in order to save lives. Watrying fact is that India ranks number one as far as road crash deaths are considered. Rapid urbanization, avoiding helmets, seat belts and other safety measures while driving are some of the reasons behind this trend according to analysis done by experts. In 2015 India signed Brasilia Declaration on Road Safety, where India committed to reduce road crash deaths to 50 percent by 2020. Policy makers first have to acknowledge the problems that persist in India before halving road crash deaths. When a two-wheeler meets with an accident, due of sudden deceleration, the rider is thrown away from the vehicle. If head strikes any object, motion of the head becomes zero, but with its own mass brain continues to be in motion until the object hits inner part of the skull. Sometimes this type of head injury may be fatal in nature. In such times helmet acts as life savior. Helmet reduces the chances of skull getting decelerated, hence sets the motion of the head to almost zero. Cushion inside the helmet absorbs the impact of collision and as time passes head comes to a halt. It also spreads the impact to a larger area, thus safeguarding the head from severe injuries.

LITERATURE SURVEY

- Circle arc detection method based on Hough Transform. They applied it to detect the presence of helmet which failed to give accurate result.
- Combination of image processing and (OCR) Optical Character Recognition to detect vehicle number plate under different background but it has worked on static i.e. non-moving images in Malaysia.

METHODOLOGY

In this research work, a Non-Helmet Rider detection system is built which attempts to satisfy the automation of detecting the traffic violation of not wearing helmet and extracting the vehicles' license plate number. The main principle involved in Object Detection using

Driver Drowsiness Detection based on Eye Aspect Ratio

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ABSTRACT:

The main idea behind this project is to develop a non-instructive system which can detect fatigue of any person and can issue timely warnings. People who do not take regular breaks during a long travel can face this fatigue situation and thus can lead to accidents, according to some expert's studies around 25% and above accidents are due to this sleepy driving. Thus to avoid such accidents we proposed this project which gives timely warnings as an alarm sound when one is fatigue, this will monitor the driver eyes using a camera and by developing an algorithm we can detect the symptoms of driver fatigue early enough to avoid sleeping. The camera keeps on observing the drivers eyes and thus gives warning alarm when a person is fatigue and automatically stops giving warning alert when the driver is in normal state.

INTRODUCTION

The main intention behind this project is to provide a public safety measure for avoiding involuntary accidents and unexpected deaths. In view with some daily news, and to control the rate of such accidents which are being constantly happening daily. This project is helpful for the people who does late night driving and long driving for all the private, public and own transport.

PROPOSED SYSTEM

In this project we willThe main intention behind this project is to provide a public safety measure for avoiding involuntary accidents and unexpected deaths.

In view with some daily news, and to control the rate of such accidents which are being constantly happening daily. This project is helpful for the people who does late night driving and long driving for all the private, public and own transport. position and scale within the original image. Due to the difference of facial features, hair-like feature is efficient for real time face detection. These can be calculated according to the difference of sum of pixel values within the rectangular area and during the process this algorithm will allow the face samples and it will discard the non-face samples of the images.

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

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ABSTRACT:

We introduce our initial work for developing a social networks recommender system called D-RECS. The system is a time-aware Twitter-based alternative medicine recommender system. We collected a set of tweets that contain specific hashtags (#Dolo-650, #fabifin, #il-complex etc). Using this data, the domain expert assigned a preliminary label to the tweet/group of tweets. The classifier, is the core component of the recommender system, is designed as a Deep Learning algorithm to classify the Tweets. Each recommendation is made by the system provides a medical advice to promote public health awareness, and a link to the recommender. We propose a solution to this problem by also analyzing the tweets of a user related to previous incidents and compare them and relatively map it on a scale. This model measures the sentiment relatively and can map it on the scale for various topics as well. As people use twitter to express themselves in different languages, we can use previous data of a user and see how that user reacts to a particular situation. First the tweets related to topic are analyzed using a sentiment analysis model and then the model to compare tweet sentiments.

Keywords: Drug recommendation, Prediction, Machine learning, recurrent neural networks.

INTRODUCTION:

With the number of corona virus cases growing exponentially, the nations are facing a shortage of doctors, particularly in rural areas where the quantity of specialists is less compared to urban areas. A doctor takes roughly 6 to 12 years to procure the necessary qualifications. Thus, the number of doctors can't be expanded quickly in a short time frame. A Telemedicine framework ought to be energized as far as possible in this difficult time [1]. Clinical blunders are very regular nowadays. Over 200 thousand individuals in China and 100 thousand in the USA are affected every year because of prescription mistakes. Over 40% medicine, specialists make mistakes while prescribing since specialists compose the solution as referenced by their knowledge, which is very restricted [2][3]. Choosing the top level medication is significant for patients who need specialists that know wide-based information about microscopic organisms, antibacterial medications, and patients [6]. Every day a new study comes up with accompanying more drugs, tests, accessible for clinical staff every day. Accordingly, it turns out to be progressively challenging for doctors to choose which treatment or medications to give to a patient based on indications, past clinical history. With the exponential development of the web and the web-based business industry, item reviews have become an imperative and integral factor for acquiring items worldwide. Individuals worldwide become adjusted to analyze reviews and websites first before settling on a choice to buy a thing. While most of past exploration zeroed in on rating expectation and proposals on the E-Commerce field, the territory of medical cure or clinical therapies has been infrequently taken care of. There has been an expansion in the number of individuals worried about their well-being and finding a diagnosis online. As demonstrated in a Pew American Research center survey directed in 2013 [5], roughly 60% of grown-ups searched online for health-related subjects, and around 35% of users looked for

EMPLOYEE SALARY PREDICTION USING MACHINE

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ABSTRACT:

Machine learning is a technology which allows a software program to become more accurate at producing more accurate results without being explicitly programmed and also ML algorithms uses historic data to produce the new outputs.

Because of this ML gets a distinguish attention. Now a day's prediction engine has become so popular that they are generating accurate and affordable predictions just like a human and being using industry to solve many of the problems.

Predicting justified salary for employee is always being a challenging job for an employer.

In this project and proposing a salary prediction model with suitable algorithm using key features required to predict the salary of employee.

Keywords:

Machine Learning, Linear regression, Model selection, Supervised Learning

INTRODUCTION:

In this paper the main aim is predicting salary and making a suitable user-friendly graph. So that an Employee can get the desired salary on the basis of his qualification and hard work. For developing this system, we are using a Linear regression algorithm of supervised learning in machine learning. Supervised

Learning is basically a learning task of a learning function that maps an input to an output of given example. In supervised * learning each example is pair having input parameter and the desired output value.

Linear regression algorithm in machine learning is a supervised learning technique to approximate the mapping function to get the best predictions. The main goal of regression is the construction of an efficient model to predict the dependent attribute from a bunch of attribute variables. A regression problem is when the output value is real or a continuous value like salary.

LITERATURE SURVEY:

14th -16th Feb 2019 a brief review of various machine learning algorithms which are most frequently used to solve classification, regression and clustering problems. The advantages, disadvantages of these algorithms have been discussed along with comparison of different algorithms (wherever possible) in terms of performance, learning rate etc. Along with that, examples of practical applications of these algorithms have been discussed [1]

Face Recognition Attendance Management System

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1. ABSTRACT

Now a days the demand for the facial recognition was increased. By using this facial recognition technology, we came with an idea that takes the attendance by detecting the faces of students. This paper is used for educational system to enhance and upgrade the current attendance system into more efficient and effective. This idea will erase the human errors.

The human face is the one of the natural traits that can uniquely identify an individual. Therefore, it is used to trace identity as the possibilities for a face to duplicate will be decreased in this system. The face databases will be created to pump the data into the algorithm. Then, during the attendance sessions, the faces will be compared against the faces in the data basis and the attendance will be given. In addition to this the message of the absence of the student will sent to the phone number against the student in the database.

In this paper we are using viola-jones algorithm for face detection and LBPH algorithm for face recognition. In which it identify the faces with 94 % accuracy.

Keywords—Facial Recognition; Face Detection; Face comparison; attendance system; messages

2. INTRODUCTION

Traditional method of attendance marking is a tedious task in many schools and colleges. It is also an extra burden to the faculties who should mark attendance by manually calling the names of students this is time consuming. There are some chances of proxy attendance.

Face recognition has set an important biometric feature, which can be easily acquirable and is non-intrusive. Face recognition based systems are relatively oblivious to various facial expressions. Face recognition system consists of two categories: verification and face identification. Face verification is a matching process, it compares face image against the template face images.

The purpose of this system is to build a attendance system which is based on face recognition techniques. Here face of an individual will be considered for marking attendance. Nowadays, face recognition is gaining more popularity and has been widely used. In this paper, we proposed a system which detects the faces of student's attendance will be marked if the detected face is found in the database. Then the messages will be sent to the parents of those students who are absent to the class. This new system will consume less time than compared to traditional methods.

Flight Delay Analysis Using Machine Learning

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ABSTRACT:

The prediction of flight delays is heavily investigated in the last few decades. Flight delays hurt airlines, airports, and passengers. The development of accurate prediction models for flight delays became cumbersome due to the complexity of air transportation system, the number of methods for prediction, and the deluge of flight data. The flight delay analysis is based on scheduled arrival, departure and actual time. In this context, this paper presents a thorough literature review of approaches used to build flight delay prediction models. We propose a taxonomy and summarize the initiatives used to address the flight delay prediction problem, according to scope, data, and computational methods, giving particular attention to an increased usage of machine learning methods. Besides, then we will check the accuracy metrics for flight delay prediction.

INTRODUCTION:

Air transportation plays a vital role in the transportation infrastructure as well as contributes significantly to the economy. Airports are known for their capability to increase business activities near them and hence result in economic development. The International Air Transport Association showed that the demand for air travel increased by 6.3 percent in the year 2016 as compared to the year 2015. There are several causes of an aircraft being delayed such as weather changes, problems in maintenance, previous delays being propagated down the line, traffic congestion and many more. A delay of an aircraft can be problematic for the travelling passengers as it prevents them from fulfilling their commitments and attending preplanned events. This can result in the passenger losing a lot of money as well as make him or her frustrated and angry.

PROPOSED SYSTEM:

The Flight delays will be calculated based on the scheduled time i.e arrival time of flight, departure time of flight and actual time of the flight. Based on the scheduled time will calculate the difference in time and make it as a target variable. We considered the dataset for flight delay analysis, where we can start the analytics preprocessing of the dataset in order to make it feasible to machine learning format. The flight delay analysis is a regression problem, then will use regression based models like linear regression and logistic regression etc. If the data has collinearity or interdependencies we will go for lasso or ridge regression then we will check the accuracy metrics, like Rmse for validating our model.

HOUSE RENT PRICE FORECASTING USING MACHINE LEARNING

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ABSTRACT:

The real estate industry is one of the most price-oriented industries and tends to fluctuate. The objective of the project is predicting the rental price for a house. In this study, a predictive model based on the factors that influence the rental price has been constructed. The dataset has thirteen features. Regression techniques such as Gradient Boosting regressor, Random Forest regressor and linear regression were applied. A predictive model is built using the regression techniques, and to pick the best performing model by performing a comparative analysis on their performance scores obtained. The expected outcome of the models is measured using performance metrics such as Mean Absolute Error (MAE), Mean Square Error (MSE), Root Mean Square Error (RMSE) and R-square score (R^2) metric. This project explains house rental price prediction model with the help of machine learning and the dataset used in our proposed model.

Keywords:

Regression, Gradient Boosting regressor, Random Forest regressor, linear regression, predictive, Mean Absolute Error (MAE), Mean Square Error (MSE), Root Mean Square Error (RMSE) and R-square score (R^2) metric.

INTRODUCTION:

Nowadays, traveling becomes much easier and more diversified. People are given a lot of options for accommodations during traveling. Where and what property type do you want to stay in when you are planning for your trip?

This may be the first concern for most people when they are making plans for the trips. Years ago, while the hotel used to be the first choice for many of us, now, people have more choices on online marketplaces, such as Airbnb.

Which is a platform connecting guests who need accommodations with hosts who want to rent their properties. By 2020, Airbnb has more than 150 million users, 0.65 million hosts, and 7 million listings globally [1].

According to the current growth, we may expect that the total number will continually increase in the next few years. Given a large number of hosts and listings, reasonable and competitive rental prices are important to maximize the benefits for both hosts and guests.

LITERATURE SURVEY:

we have to analyse the different Machine Learning algorithms for better training Machine Learning model. Trends in housing cost show the current economic situation and as well as to

Liver disease prediction using Machine Learning

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ABSTRACT:

Recently, Information Systems and strategic tools are being incorporated as additional means to aid the process of diagnosis of diseases in medical research. The liver, an essential organ is crucial in enzyme activation, bile production, metabolism of fats and storage of vitamins, glycogen and minerals. Liver diseases are difficult to diagnose and hence are often neglected due to the lack of proper symptoms at the initial stages. One of the most common symptoms of most liver diseases is hyperbilirubinemia which is hard to distinguish in early determination. In any case, this isn't quite certain and the perception of enzyme level is required to distinguish and affirm the nearness of liver illness. Various machine learning techniques have been used in the prediction of liver diseases. In this research, we propose the usage of, Random Forest Algorithm Machine techniques in the prediction of liver disease by Binary Classification of the dataset into two given categories of patient experiencing liver sickness or not. The dataset contains information about patient attributes such as Total Bilirubin, Alanine Aminotransferase, Direct Bilirubin, Aspartate Aminotransferase, Age, Gender, Albumin, Total Protein, Alkaline Phosphatase, Albumin and Globulin Ratio and the Result. The prediction from the above mentioned algorithms are compared on the parameters of Accuracy and various error calculations to determine the best suited algorithm.

INTRODUCTION:

The liver is a large, meaty organ that sits on the right side of the belly. Weighing about 3 pounds, the liver is reddish brown in color and feels rubbery to the feel. The liver has two large sections, called the right and the left lobes. The gallbladder sits below the liver, along with parts of the pancreas and intestines. The liver and these organs behavior together to digest, absorb, and process food. The liver's main job is to strain the blood coming from the digestive tract, before passing it to the rest of the body. The liver also detoxifies chemicals and metabolizes drugs. As it does so, the liver hides bile that ends up back in the intestines. The

Missing Child Identification System Using Deep Learning and Muticlass SVM

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ABSTRACT

This paper presents a novel use of deep learning methodology for identifying the reported missing child from the photos of multitude of children available, with the help of face recognition.

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. Choosing the best performing CNN model for face recognition, VGG-Face and proper training of it results in a deep learning model invariant to noise, illumination, contrast, occlusion, image pose and age of the child and it outperforms earlier methods in face recognition based missing child identification.

INTRODUCTION

Children are the greatest asset of each nation. The future of any country depends upon the right upbringing of its children. India is the second populous country in the world and children represent a significant percentage of total population. But unfortunately a large number of children go missing every year in India due to various reasons including abduction or kidnapping, run-away children, trafficked children and lost children. A deeply disturbing fact about India's missing children is that while on an average 174 children go missing every day, half of them remain untraced. Children who go missing may be exploited and abused for various purposes.

SECURITY & SURVEILLANCE REPLACING EXISTING NUMBER PAD WITH DIGITAL TOUCH NUMBER PAD

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Abstract

When a person is entering the pin,the people nearby that person knows the pin by his hand movements.If there is a thief among them,whenever he steals the card he can easily enter the pin and make the transactions without any alert messages.

To provide more security for pin authentication,we suggest random generating of digits for every Transaction ,with digital touch number pads (i.e. the positions of the digits differs from one transaction to other.). With this we are also adding a feature that if the customer wants to withdraw more than 5000 the he needs to enter the otp, by this the security will be increased.By this,we can add additional security to the users.And the thief cannot be able to recognize the pin by hand movement,It is easy to Use and implement with low budget

Introduction:

ATM Security is an application that helps to reduce the shoulder surfing. It provides more security for the user while entering his/her PIN.Existing Numberpads are replaced with Digital Touch Numberpads so that the user gets more security for his/her PIN as these Digital Numberpads are Shuffled for Every Transaction. So that there is no chance of shoulder surfing. With this we are also adding a feature that if the customer wants to withdraw more than 5000 the he needs to enter the otp, by this the security will be increased.By this,we can add additional security to the users.And the thief cannot be able to recognize the pin by hand movement.

Literature survey:

Identification is the establishment of identity. Authentication confirms claims by use of identity. PIN authentication technique has many problems. Biometrics is best for authentication today and is realistic[2]. Multifactor authentication technique will enhance banking transactions via ATM. Technique proposed in our work involves three authentications techniques to further enhance ATM usage an

operations.Shuffled ATM keypad method and they develop Bluetooth application to overcome the shortfalls of PIN entry was proposed by [3]. This method shows numbers in the Liquid Crystal Display keypad and communicates the password through the wireless medium.

Our popularly known numeric keypad is colored at random, partblack and the other white. Only users with correct PINdigit can answer the colors. A keyboard using fake cursor that hides password entry on screen was presented by [6]. In this system, only one cursor is for actual input while others are distraction for third parties.In the process of ATM transaction, there are different aspects that should be considered. Personal identification number has been of very great importance in the normal operation. The PIN is not printed or embedded on the card but is manually

Working of application:

1. Card Number Entry Module

- ◆ The user's ATM card number is entered as an Input here.
- ◆ Submit, Backspace, Cancel are the three buttons in this module.
- ◆ Whenever User click on Submit the screen moves to message Module.
- ◆ Backspace is used to remove last character from the text entered by the user.

SEGMENTATION IN LIVER CT IMAGES IS INVOLVED WITH WIDE RANGE OF TECHNIQUES

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ABSTRACT:

Medical Image Processing is undergoing with lots of modifications and various image modalities due to the existence of minute artefacts. Due to such reason, image segmentation of images become more cumbersome and critical task when discussed in terms of tumour pathology. The process of image segmentation became more tedious job towards collecting the images of various organs and identifying the problems within them. The major role of the current research is to segment and extract the liver Computed Tomography (CT) image. This process will help to detect various tissues and various artefacts details from the complex part of a human body. There are many types of segmentation methods using thresholding, watershed, region growing, deformable models and also by using fuzzy set of CT Images. It is observed that a deformable model includes parametric and geometric active contours. There are many limitations while using traditional snakes, GVF snakes, balloon forces with respect to Gaussian function and indentation.

Self Diagnosing Health Care Chatbot Using Machine learning

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ABSTRACT

To lead a good and healthy life healthcare is extremely much important. It is very difficult to get the consultation with the doctor in case of any health issues. The proposed idea is to make a medical chatbot using AI which will diagnose the disease and supply basic details about the disease before consulting a doctor, to scale back the healthcare costs and improve accessibility to medical knowledge the medical chatbot is made. Few chatbots acts as reference books, which helps the patient find out about the illness and assists with improving their wellbeing. The user is able to do the important advantage of a chatbot only it can diagnose all quite disease and supply necessary information. A text-to-text diagnosis bot connects patients about their medical issues and gives a customized diagnosis to support their symptoms. Hence, people will have a thought about their health and have the proper protection.

INTRODUCTION

A prosperous society is when its entire people are healthy. It is important to maintain the health if one wishes to be happy. Only a healthy body can have a healthy mind and it has a positive impact on the performance of people. Nowadays, people are less aware of their health. In their busy life, they forget to take suitable measures to maintain their health and are less aware of their health status. In the latest news by TOI, we can see that people give no importance to their health and find it time consuming to undergo check-ups at hospitals. The busy-scheduled life has got no place for health. Most people comprising the working section of the society claim that their hectic schedule gives them no time for periodic medical check-ups and that they

Software Defect Estimation Using Machine Learning Algorithms

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ABSTRACT:

Software defect prediction analysis is an important problem in the software engineering community. Software defect prediction can directly affect the quality and has achieved significant popularity in the last few years. This software prediction analysis helps in delivering the best development and makes the maintenance of software more reliable. This is because predicting the software faults in the earlier phase improves the software quality, efficiency, reliability and the overall cost in SDLC. Developing and improving the software defect prediction model is a challenging task and many techniques are introducing for better performance. Supervised ML algorithm have been used to predict future software faults based on historical data [1]. These classifiers are Naïve Bayes (NB), Support Vector Machine (SVM) and Artificial neural network (ANN). The evaluation process showed that ML algorithms can be used effectively with a high accuracy rate. The comparison is made with other machine learning algorithms to finds the algorithms which gives more accuracy. And the results show that machine learning algorithms gives the best performance. The existence of software defects affects dramatically on software reliability, quality, and maintenance cost. Achieving reliable software also is hard work, even the software applied carefully because most time there is hidden errors. In addition, developing a software defect prediction model which could predict the faulty modules in the early phase is a real challenge in software engineering. Software defect prediction analysis is an essential activity in software development. This is because predicting the bugs prior to software deployment achieve users satisfaction, and helps in increasing the overall performance of the software. Moreover, predicting software defects early improves software adaptation to different environments and increases resource utilization.

INTRODUCTION:

Software Defect Prediction is an important issue in software development and maintenance processes, which concerns with the overall of software success. Predicting and finding the bugs in the earlier phase in SDLC makes the software more reliable, efficient and better quality when compared with finding bugs in the later stages. However, developing a software defect prediction

SPAM DETECTION ON YOUTUBE COMMENTS

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ABSTRACT:

The profitability promoted by Google in its brand new video distribution platform YouTube has attracted an increasing number of users. However, such success has also attracted malicious users, which aim to self-promote their videos or disseminate viruses and malware. Since YouTube offers limited tools for comment moderation, the spam volume is shockingly increasing which lead owners of famous channels to disable the comments section in their videos. Automatic comment spam filtering on YouTube is a challenge even for established classification methods, since the messages are very short and often rife with slangs, symbols and abbreviations. In this work, we have evaluated several top-performance classification techniques for such purpose. The statistical analysis of results indicate that, with 99.9% of confidence level, decision trees, logistic regression, Bernoulli Naive Bayes, tandem forests, linear and Gaussian SVMs are statistically equivalent. Based on this, we have also offered the Tube Spam - an accurate online system to filter comments posted on YouTube.

INTRODUCTION:

The popularization of broadband around the world has boosted the amount of Internet users. With faster connections, video host and sharing services became popular among users. According to a press release of Sandvine1, a company focused on standards-compliant network policy control, around 55% of downstream traffic from United States is due to video platforms like Netflix and YouTube. The availability of resources through Internet and the broadband connections allowed the appearance of sophisticated new platforms. In this way, YouTube is a famous video content publication platform with social network features, such as support for posting text comments to provide interaction between producer (channel owner) and viewers. The success of YouTube can be expressed through recent statistics reported by Google2: the platform has more than 1 billion users, 300 hours of video are uploaded every minute and it generates billions of views every day. Around 60% of a creator's views come from outside their home country and half of YouTube views are on mobile devices. Recently, YouTube has adopted a monetization system to reward producers, stimulating them to make high quality original content and increasing the amount of visualizations. After the deployment of this system, the platform was flooded by undesired content, usually of low quality information known as spam. The spam found on YouTube is directly related to the attractive profit offered by the monetization system. According to a press release by Google, more than a million advertisers are using Google ad platforms, the mobile revenue on YouTube is up 100% year over year and the number of hours people are watching on YouTube each month is up 50% year over year. At the same time, according Nexgate, a computer security company, just in the first half of 2013, the volume of social spam increased 355%3. For each spam found on any social network, other 200 spams are found on Facebook and YouTube. The problem became so critical that it motivated users to create a petition in 2012, in which they ask YouTube to provide tools to deal with undesired content4. In 2013, the YouTube official blog reported efforts to deal with undesired comments through recognition of malicious links, ASCII art detection and display changes to long comments5. However, many users

Spammer Detection and Fake User Identification On Social Networks

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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 Face book 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 those 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, 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.

INTRODUCTION:-

It has become quite unpretentious to obtain any kind of information from any source across the world by using the Internet. The increased demand of social sites permits users to collect

TEXT SUMMARIZATION USING EXTRACTIVE TECHNIQUES

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ABSTRACT:

Text Summarizer refers to the technique of shortening long pieces of text. The intention is to create a coherent and fluent summary having only the main points outlined in the document. The need for text summarization is "Today, our world is parachuted by the gathering and dissemination of huge amounts of data. With such a big amount of data circulating in the digital space, there is need to develop Natural Language Processing algorithms that can automatically shorten longer texts and deliver accurate summaries that can fluently pass the intended messages."

There are mainly two types of how to summarize text in Natural Language Processing; they are Extraction-based summarization and Abstractive-based summarization. The extractive text summarization technique involves pulling key phrases from the source document and combining them to make a summary. The abstraction technique entails paraphrasing and shortening parts of the source document. We use Extraction-based summarization model. This model takes a input that encapsulates some paragraphs and returns a text summary that represents the key information or message in the input text. That text summary reduces reading time, accelerates the process of researching for information, and increases the amount of information that can fit in an area.

Keywords : Text Summarizer, Extraction, Abstraction

INTRODUCTION:

A summary is a text that is produced from one or more texts, that convey important information in the original text, and it is of a shorter form. Text summarization refers to the technique of shortening long pieces of text. Text summarization finds the most informative sentences in a document. Automatic text summarization is a common problem in machine learning and natural language processing (NLP).

TRACKING SOCIAL DISTANCE USING DEEP LEARNING

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ABSTRACT

The constant COVID-19 Covid episode has caused a general debacle with its unsafe spreading, in view of the difficulty of compelling retouching prepared experts and in this manner the shortfall of immunizations against the infection, individuals inadequacy recommendations inside the flow circumstance, as there aren't any antibodies open; hence, social dispensing with is acknowledged to be a satisfactory cautious advance (standard) against the spread of the pandemic infection. The risks of infection spread may be limited by keeping isolates from veritable contact among individuals. The thinking for this work is, subsequently, to manage a critical learning stage to social distance by besides executed to make the accuracy of the model. Along these lines, the conspicuousness assessment utilizes a coordinated calculation that is associated with an additional a set up the perceived bounding box centroid's pairwise distances of people are settled. To assess social distance infringement between individuals, we utilized an appraisal of authentic distance to pixel and set a grip. An infringement limit is ready up to assess whether the space respect breaks the base social distance edge. Examinations are done on various video plans to truly check out at the ability of the model. Exposures show that the made structure truly sees individuals that walk excessively close and penetrates/misses social separation; moreover, the trade gathering approach keeps up with the general efficiency of the model. The exactness of 91% and 96% achieved by the assertion model without and with move learning, independently. The going with exactness of the model is 94%.

Key Words : Deep learning, Yolo v3, person identification

INTRODUCTION

When the novel corona virus (Covid-19) pandemic emerges, the spread of the virus has left public keep anxiety if they do not have any effective cure. The World Health Organization (WHO) has declared Covid-19 as a pandemic due to the increase in the number of cases reported around the world. To contain the pandemic, many countries have implemented a lockdown where the government enforced that the citizens to stay at home during this critical period. The public health bodies such as the Centers for Disease Control and Prevention (CDC) had to make it clear that the most effective way to slow down the spread of Covid-19 is by avoiding close contact with other people. To flatten the curve on the Covid-19 pandemic, the citizens around the world are practicing physical distancing. To implement social distancing, group activities and congregations such as travel, meetings, gatherings, workshops, praying had been banned during the quarantine period. The people are encouraged to use phone and mail to manage and conduct events as much as possible to minimize the person-to-person contact. To further contain the spread of the virus, people are also informed to perform hygiene measures such as frequently washing hands, wearing mask and avoiding close contact with people who are ill. However, there is a difference between knowing what to do to reduce the transmission of the virus and putting them into practice. The world has not yet fully recover from this pandemic and the vaccine that can effectively treat Covid-19 is yet to be discovered. However, to reduce the impact of the pandemic on the country's economy, several governments have allowed a limited number of economic activities to be resumed once the number of new cases of Covid-19 has dropped below a certain level. As these countries cautiously restarting their economic activities, concerns have emerged regarding workplace safety



Using Deep Learning to Predict Plant Growth/Yield in Green House Environments

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ABSTRACT

In this project we are predicting Plant growth/leaf yield by analyzing performance of various machine learning algorithms such as SVM (Support Vector Regression), Random Forest Regression (RF) and LSTM (Long Short-Term Memory) deep neural network algorithm. SVM and RF are the traditional old algorithms whose performance of prediction will be low due to unavailability of deep learning techniques. To overcome from this problem we using LSTM deep neural network algorithm to predict plant growth. These complex models employed in DL can increase classification accuracy, or reduce error in regression problems, provided there are adequately large datasets available describing the problem. These complex models employed in DL can increase classification accuracy, or reduce error in regression problems, provided there are adequately large datasets available describing the problem. The LSTM model is introducing with the objective of modeling long term dependencies and determining the optimal time lag for time series problems. A LSTM network is composed of one input layer, one recurrent hidden layer, and one output layer. The basic unit in the hidden layer is the memory block, containing memory cells with self-connections summarizing the temporal state and a pair of adaptive, multiplicative gating units controlling information flow in the block. The memory cell is primarily a recurrently self-connected linear unit, called Constant Error Carousel (CEC), and the cell state is represented by the activation of the CEC. The multiplicative gates learn when to open and close. By keeping the network error constant, the underlying gradient problem can be solved in LSTM. Moreover, a forget gate is added in the memory cell preventing the gradient from exploding when learning long time series.

Keywords: Growth, yield rate, Prediction, deep learning, recurrent LSTM neural networks.

1. INTRODUCTION

When plants and crops are affected by pests it affects the agricultural production of the country. Usually, farmers or experts observe the plants with naked eye for detection and identification of disease. But this method can be time consuming, expensive and inaccurate. Automatic detection using image processing techniques provide fast and accurate results. This paper is concerned with a new approach to the development of plant disease recognition model, based

on leaf image classification, by the use of deep convolutional networks. As with many bio-systems, plant growth is a highly complex and dynamic environmentally linked system. Therefore, growth and yield modeling is a significant scientific challenge. Modeling approaches vary in a number of aspects (including: scale of interest, level of description, integration of environmental stress, etc.). According to (Todorovskii and Demokki, 2006; Atanasova et al., 2009) two basic modeling approaches are possible.