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ABSTRACTS

Title : Image Zooming using Fractal Transform

Author:Vivek Baranwal, Sahad Chauhan, Ameya Bhaktha,Ajay Chawda

Project Guide: Dr. RAVINDRA CHAUDHARI

Abstracts : Image zooming is a technique of producing a high resolution image from its low-resolution counterpart, which is often required in many image processing tasks. It is one of the important aspect of Image Enhancement, because of its widely used application including the World Wide Web, digital video, and scientific imaging. In this project, a very different technique for image zooming called fractal transform is proposed. The proposed method provides better image zooming in comparison with the other standard interpolation techniques, since fractals are recursive and self-similar mathematical figure. This technique makes use of affine transform and block matching algorithm which converts different blocks of image into fractal code, to reconstruct a zoomed image. Although it being a compression technique, the compressed image can be used for zooming since fractal transform has a resolution independent property. Also since fractal compression is a lossy technique, which can be seen in the zoomed image, so to overcome this loss we researched and developed an algorithm that uses Overlapped Range Block partitioning (ORB).

Acc.No: PR1716

Title : Dimensionality Reduction Techniques for Music Genre Classification

Author:Priyank Bhat, Dinesh Bhosale, Suvitha Nair

Project Guide: Dr. Kevin Noronha

Abstracts :Music genre can be viewed as categorical labels created by musicians or composers in order to find the content or style of the music. Classifying music into their genre on online music stores, and presenting content based on genre preferred by the customer will reduce the browsing time of consumers. The framework of music genre classification typically involves feature extraction, dimensionality reduction, and feature classification [1]. Here, music genre classification is performed using an approach of spectrograms and Mel-spectrograms. With the intention of extracting distinctive features that contribute to the accurate classification of music according to genres, features extracted include Mel Frequency Cepstral Coefficients (MFCC), rms, mode, irregularity, flatness, spectral flux, spectral roll-off, zerocross, harmonic change detection function (hcdf), keyclarity, roughness and slope. The mean, standard deviation, skewness and kurtosis are the four chosen values that are calculated for each extracted feature. To extract features, MIR (Music Information Retrieval) Toolbox is used. The MIR Toolbox consists of integrated set of functions written in MATLAB which are dedicated for the extraction of musical features from the audio files. To overcome the curse of dimensionality problem, suitable dimensionality reduction techniques needed to be applied to the extracted features. Results are computed for the GTZAN database, consisting of ten genres, each genre consisting of ten audio files. Support Vector Machine (SVM) is used as classifier and its multi-class implementation is used for classification. A comparative analysis between the dimensionality reduction techniques such as Principal Component Analysis (PCA) and t- Stochastic Neighbor Embedding (t-SNE) is further done where it is observed that t-SNE yields better results than PCA.

Acc.No: PR1717

Title : Fire Extinguishing Robot

Author:Abhishek Hegde, Akshat Mandal, Vaibhav Bhatia, /Ashwani Balakrishnan

Project Guide: Dr. Gautam Shah

Abstracts :This report describes the design and development of a smart, motorized, acoustic based Fire Extinguishing Robot using multiple sensors. In this report, a prototype that consists of 4 units namely Sensor Unit, Navigation monitoring Unit, Motor Control Unit and Fire Extinguishing and alarming Unit all controlled by Arduino have been illustrated. The Sensor Unit senses the environment and the output is fed to the Arduino. This input is then processed for successive detection of respective parameters of all three sensors, the Arduino sends an alert message to the user and asks whether to operate in autonomous mode or manual mode. Based on the command from the user, Arduino directs the Movement Control Unit and Motor Control Unit to take action accordingly. The Fire Extinguishing Unit will continue to extinguish fire till the Sensor Unit detects the fire as extinguished.

Acc.No: PR1718

Title : IoT based Stock Management System using RFID

Author: Mitalee Main, Ancita Lewis, Jeslyn Daniel, Namrata Kole

Project Guide: Ms. JAYASUDHA KOTI

Abstracts :In supermarkets, a store house is present where extra stock is stored to replenish the stock in the super market. Most of the times in the supermarket , some products get over due to their increased sale when such products are less in number. Our project aims to inform the authorities about the shortage of such products beforehand without manual checking. Each product is attached with a RFID tag. Information about each product (i.e. price ,quantity, tag numbers, etc.) will be stored at a database that will be regularly updated and according to the quantity value, the authorities will be informed about the status of each product.

Acc.No: PR1719

Title : Speedy Vehicle Number Plate Recognition

Author:Merwyn Fernandes, Jeevan Dsouza, Shashikant Dubey, Clevin Dsouza

Project Guide: Ms.Shilpa Chaman

Abstracts :The NPR (Number Plate Recognition) using is a system designed to help in recognition of number plates of vehicles. This system is designed for the purpose of the security system. This system is based on the image processing system. This system helps in the functions like detection of the number plates of the vehicles, processing them and using processed data for further processes like storing, allowing vehicle to pass or to reject vehicle. NPR is an image processing technology which uses number (license) plate to identify the vehicle. The objective is to design an efficient automatic authorized vehicle identification system by using the vehicle number plate. The developed system first captures the vehicle image. Vehicle number plate region is extracted using the image segmentation in an image. Optical character recognition technique is used for the character recognition. The resulting data is then used to compare with the records on a database. The system is implemented and simulated in MATLAB, and it performance is tested on real image. It is observed from the experiment that the developed system successfully detects and recognize the vehicle number plate.

Acc.No: PR1720

Title : Ambulance Medi-kit

Author:Ketan Munasu, Pranjali Churi, Tejas Jadhav, Brendon Castelino

Project Guide: Ms.SHILPA CHAMAN

Abstracts :Internet of Things (IoT) is defined by many people but in simple words IoT is nothing but some devices that connect to one another and interact using the internet. The

“thing” in IoTs could be a person with a heart monitor or an automobile with built-in sensors, i.e. objects that have been assigned an IP address and have the ability to collect and transfer data over a network without manual assistance or intervention. The embedded technology in the objects helps them to interact with internal states or the external environment, which in turn affects the decisions. Internet of Things can connect devices embedded in various systems through the internet. When devices/objects can represent themselves digitally, they can be controlled from anywhere. The connectivity then helps us to capture more data from more places. One of the key learning platforms for IoT is the Raspberry Pi. The combination of Raspberry pi IoT becomes a new innovation technology in healthcare system. Raspberry pi act as a small clinic after connecting these (Temperature, Humidity, Oximeter, Blood pressure, Glucometer) sensor. Raspberry pi works as a clinic in many places. Raspberry pi is collecting data from sensor and then it transfer wirelessly to Iot website. Raspberry pi board is connected to the internet that bored mac addressed is registered to the internet after that in IoT website, add mac address of this board. Then the sensor output is connected to the IoT website [1]

Acc.No: PR1721

Title : Robust Speaker Verification

Author:Vikrant Kumar, Vikram Kudva, Sharvil Mainkar, Glen Monteiro

Project Guide : Dr. Deepak Jayaswal

Abstracts :Speaker Recognition (SR) is the process of automatically recognizing the person speaking on the basis of the information obtained from the speech features. SR process involves Speaker verification (SV) and Speaker Identification (SI). Automatic Speaker verification (ASV) is the process of authenticating the true identity of the speaker. ASV is generally accomplished in four steps. The first step is the digital speech data acquisition. In the second step, feature extraction and feature selection are performed. The third step involves clustering the feature vectors and storing in a database. Decision-making through Pattern matching is the last step. The importance of feature vector extraction, selection and normalization are also discussed.

Acc.No: PR1722

Title : Object Detection using Single Shot Detector

Author:Sudeep Desai, Swapnil Javkhedkar, Pancham Desai, Sameer Deodhar

Project Guide: Dr.kevin Noronha

Abstracts :Efficient and accurate object detection has been an important topic in the advancement of computer vision systems. With the advent of deep learning techniques, the accuracy for object detection has increased drastically. The project aims to incorporate state-of-the-art technique for object detection with the goal of achieving high accuracy with a real-time performance. A major challenge in many of the object detection systems is the dependency on other computer vision techniques for helping the deep learning based

approach, which leads to slow and non- optimal performance. In this project, a completely deep learning based approach is used to solve the problem of object detection in an end-to-end fashion. The network is trained on the most challenging publicly available dataset (MS-COCO), on which an object detection challenge is conducted annually. The resulting system is fast and accurate, thus aiding those applications which require object detection.

Acc.No: PR1723

Title : Fashion Product Recognition using Deep Learning

Author:Dhura Mistry, Sayali Naik, Anjali Menon, Isha Mhashete

Project Guide: Mr.SANTOSH CHAPANERI

Abstracts :In this project, classification of Fashion Accessories is done using CNN-Softmax and CNN-SVM. We have compared the CNN-Softmax model and CNN-SVM model for comparative analysis. In case of CNN-SVM model, it uses hinge loss function instead of the traditional Softmax Activation function followed by the cross entropy loss function. Result analysis was performed on both the models for classification of both MNIST and Fashion-MNIST dataset. Accuracy of almost 99% was observed for both the models in case of classification of MNIST Dataset, and in case of classification of Fashion-MNIST dataset accuracy of 91% was observed.

Acc.No: PR1724

Title : Naturalness in Text to Speech System

Author:Vidisha Anchan, Divya Kotian, Vaishnavi Deo, Anushka Churi

Project Guide: Dr. DEEPAK JAYASWAL

Abstracts :Speech is a basic communication mechanism in human beings. Its main intention is to convey a message, using a sequence of sound units of a language. The human instinct detects emotions by observing psychovisual appearances and voices. Machines may not fully take human place but still are not behind to replicate this human ability if speech emotion detection is employed. Recent developments in human–computer interaction technology go beyond successful transfer of data between human and machine by pursuing improved naturalness and friendliness in user interactions. The speech signal information may be expressed or perceived in the intonation, volume and speed of the voice and in the emotional state of people. Detection of human emotions will improve communication between human and machine. Speech analysis is the process of converting a speech signal to an alternative representation that in some way better represents the information. This is useful in various real-life applications as systems for real life emotion detection using corpus of agent client spoken dialogues from call center like for medical emergency, security, prosody generation, etc.

Acc.No: PR1725

Title : Smart Locker Security System

Author:Ronak Gala, Rajshree Bagul, Sneha Dharne, Vishruti Ghag

Project Guide: Ms.Savita kulkarni

Abstracts :The main goal of this project is to design and implement a highly secured and reliable smart locker security system based on multiple Bio-metric technologies which includes fingerprint and ear recognition. This can be organize in bank, offices (treasury), schools and homes. In this system, only the authentic person can open the lock and collect the important documents, jewellery or money from the lockers.

The primary section of our project is based on bio-metric fingerprint and GSM system. The biometric verification is done by fingerprint module to recognize the fingerprint of the user and if the user is valid an OTP is generated through GSM and send to user's stored number for accessing locker.

The secondary section is based on ear recognition technology. A class of biometrics based on ear detection and recognition is used in a passive identification system. Feature extraction and classifier is most important part. There are so many methods for feature extraction and classification. Hence, we decided to make a system with the use of Principal Component Analysis (PCA) algorithm which is implemented using MATLAB.

Acc.No: PR1726

Title : Detection of Abandoned Objects in Crowded Environments

Author:Gayatri Das, Aishwarya Gupta, Alston D'Almeida, Arindam Ghoshal

Project Guide: Mr. Kevin D'souza

Abstracts :In recent years, visual surveillance has gained importance in security, law enforcement and military applications. Due to the wide use of video surveillance systems, the amount of data that has to be monitored and interpreted has increased enormously. Nowadays, the pure mass of information that has to be handled by the operators of such systems has overgrown their capabilities. It has become vital to have in place efficient threat detection systems that can detect and recognize potentially dangerous situations, and alert the authorities to take appropriate action. The project describes a general framework that detects an unattended bag. After this an alarm will ring which will notify the concerned authorities about the unattended baggage.

Acc.No: PR1727

Title : Splicing Image Forgery Detection

Author:Abdur Rehman, Deepak Mishra, Christopher Mathew, Cruzmanoel Fernandes

Project Guide:Dr. Ravindra Chaudhari

Abstracts :Due to the evolving digital technology and availability of various tools, forging an image is easy. Manipulations in the image used for visual evidence may lead to false verdicts. Hence, authentication of the image is needed before it is used. The human eyes can perceive the manipulations in the chrominance component more than the luminance component. The tampering artifacts appear to be more visible in the chrominance than the luminance component. Hence the features of the chrominance component are exploited for forgery detection. In this project, a passive transform-based approach for splicing image forgery detection has been implemented. The chrominance component (Cb or Cr) is extracted from the RGB image and converted into overlapping blocks of 16x16 with 50% overlap. Local Binary Pattern (LBP) is computed for each of the blocks and then converted into frequency domain using Discrete Cosine Transform (2D-DCT). Standard deviation, kurtosis and combination of standard deviation and kurtosis were considered as features for the respective blocks. Support Vector Machine (SVM) classifier was used to distinguish between the two classes namely forged and unforged. Experimental results using the proposed method on the related datasets reveal that the accuracy of detection up to 96.1% is obtained.

Acc.No: PR1728

Title : Smart Hand Gesture Vocalizer

Author:Nilesh Nagane, Tristan Colaco, Suraj Borade, Jatin Mali

Project Guide: Mr.Vaqar Ansari

Abstracts :Gesturing is an inherent way of communicating to define the thoughts. Researches are being going on the sign language interpretation with the help of gesture from decades to serve as a device for dumb and deaf into the community with minimum barriers. Smart Hand Gesture Vocalizer is device which aims to helps the speech impaired by reducing this communication gap between speech impaired and normal people. The project includes two domains where first is the gesture recognition through embedded system and the second is gesture recognition using image processing where the use Open Computer vision is done. The embedded system involves input of finger motion using flex sensors which are later inputted to the microcontroller. In this project the device's primary objective is to convert hand gestures into vocal output through flex sensors where the gestures produced bending in sensors which in turn produces change in resistance to produce corresponding voltage signals which are interpreted in terms of binary code for specific predefined commands. In the image processing domain, first detection of the object is done followed by motion tracking to detect the gesture in terms of angle and distance for corresponding predefined command. Object detection and tracking involves object detection using Open CV and the coding is done using python. Then these results are combined where the objective is achieving a combined result to increase the accuracy of embedded system and object detection and tracking of hand gestures. The vocal output is in the form of predefined vocal commands where particular hand gesture is associated with appropriate command. This project will reduce the gap between the speech impaired people and the outside world.

Acc.No: PR1729

Title : Fruit Plucking Robotic Arm using ANN

Author:Hrushikesh Jagtap, Roshan Jha, Gaurav Kadam, Mandar Deshpande

Project Guide: Mr.Santosh Chapaneri

Abstracts :Agriculture is a very labor intensive field and the only field where robots are not involved. Nowadays many industries are trying to reduce this human labor by making robots and machines. A vision based row guidance method is presented in this project to guide a robot platform which is designed independently to drive through the row crops in a field. We have implemented a fruit plucking robotic arm which will detect the color and texture of the fruit and send the observations to the user. We will be using artificial neural networks for creating a database of the fruits which will help the robotic arm in learning about certain features of a fruit.

Acc.No: PR1730

Title : Truth Discovery Analysis of Crowded Sourced Data

Author:Sonali Konduskar, Siddhi Kochar, Karan Bane, Asmita Kothawale

Project Guide: Mr. Santosh Chapaneri

Abstracts :Our day to day life has always been influenced by what people think. Ideas and opinions of others have always affected our own opinion. Sentiment analysis is a sub-domain of opinion mining where the analysis is focused on the extraction of emotions and opinions of the people towards a particular topic from a textual data. In this project, the focus is on sentiment analysis of movie reviews using natural language processing (NLP) methods along with algorithms such as Expectation Maximization and Maximum Likelihood Estimator. We examine the sentiment analysis expression to classify the polarity of movie reviews and also to find the reliability of the annotators.

Acc.No:PR1731

Title : Drone Vision for 3D Image Construction

Author:Karthik Sunil, Aaditya Khare, Pranav Karmarkar

Project Guide: Dr. Gautam Shah

Abstracts :Detailed study and analysis of artifacts from archaeological sites and historical monuments become difficult, perhaps even impossible, due to access restrictions on the common man. In such cases, by using a 3D model of the object, it is easy to examine the geometrical intricacies of an object in question. Our project involves taking such an object and having a drone encircle it, capturing several images of it from various angles. A 3D Image of the object will be generated from these images.

Acc.No: PR1732

Title : Underground cable fault distance locator using 8051 development board

Author:Swati Agnihotri, Tejas Naik, Mihir Marathe, Shreya Dethe

Project Guide:Ms.Savita Kulkarni

Abstracts :This project proposes fault location model for underground cable using 8051 development board. The aim of this project is to determine the distance of underground cable fault from base station in kilometers.This project uses the simple concept of Ohm's law. When any fault like short circuit occurs, voltage drop will vary depending on the length of fault in cable since the current varies. A set of resistors are therefore used to represent the cable and a dc voltage is fed at one end and the fault is detected by detecting the change in voltage using analog to voltage converter and a microcontroller is used to make the necessary calculations so that the fault distance is displayed on the LCD display. Now the world is become digitalized so the project is intended to detect the location of fault in digital way.

Acc.No: PR1733

Title : Design of Metamaterial Inspired Patch Antenna

Author:Kuldeep Gadhiya, Raj Khatri, Kiran Kale

Project Guide: Ms. Anjali Chaudhari

Abstracts :Now-a-days wireless application is a rising technology for a wide range of high-performance application such as mobile communication, satellite application, wearable antennas etc. Reduction of specific absorption rate (SAR) has now become a buzz word because of the growing health concerns over microwave exposure. To reduce the specific absorption, rate the metamaterials are used. In Metamaterials, electromagnetic-band gap structure (EBG) has tendency to reflect the frequency selective surface (FSS). A UC-EBG is designed at 6.19Ghz and microstrip patch is also designed. The antenna and UC-EBG has been fabricated on FR-4 substrate having dielectric constant of 4.4. Along with the reduction in backward wave propagation, here the effect of EBG structure on gain, directivity, current distribution, radiation pattern and specific absorption rate (SAR) is measured and also studied thoroughly.

Acc.No:PR1734

Title : Realtime Vehicle Management using IOV

Author:Vinit Naik, Ravina Desai, Anselm Dsouza

Project Guide: Ms.Snehal Lopez

Abstracts :Every day activities will become more and more easy and comfortable using IoT. IoT has brought in huge improvements in the domestic sphere, agriculture, smart cities, smart cars, smart homes, etc. In the business sector, IoT has brought in notable advancements in production and service industry. Quality assessment monitoring and improvement has been a

major booster to these industries because of IoT. IoT will bring in new opportunities in the information and communication technologies sector.

Acc.No: PR1735

Title : Advanced Vehicle Security System using ARM7

Author:Mahesh Thakur, Abhishek Tiwari, Gokul Shrivastava, Rohan Nayak

Project Guide: Ms.Afreenzehra Sayed

Abstracts :This proposed work is an attempt to design an advance vehicle security system that uses GPS and GSM system to prevent theft and to determine the exact location of vehicle. Today theft is happening on the parking or in some insecure place. The safety of the vehicle is exceptionally essential. The advance vehicle security system is designed using GPS and GSM technology. The system contains GPS module, GSM modem, Infrared sensors, DTMF tone decoder, 8051 microcontroller, relay switch, paint spray and high voltage mesh. GPS system track the current location of vehicle, there are two types of tracking used one is online tracking and other is offline tracking. GSM system is also installed in the vehicle for sending the information to the user because GPS system can only receive the vehicle location information from satellites. In case of accident this system automatically sends the message for help to ones relatives. The preventive measures like engine ignition cutoff, fuel supply cutoff, electric shock system (installed on steering wheel) and paint spray system are installed in the vehicle which is controlled using user GSM Mobile. This complete system is designed taking in consideration the low range vehicles to provide them extreme security

Acc.No: PR1736

Title : Canteen Cashier using RFID Tags

Author:Vithaldas Nayak, Elliot Rebello, Akshay Sevak

Project Guide: Ms.Jayasudha Koti

Abstracts :The aim of the project is to use digital money concept for Canteen Cashier system. It involves use of RFID technology, computer display and database. This helps us to avoid hard cash transactions or handling paper coupons for transactions. The beholder on tapping his/her RFID passive tag on RFID reader(EM-18) and entering correct password would be allowed to enter the system, wherein the menu of Canteen would be displayed. On selecting eatables via touchscreen the respective amount would be deducted from customer as balance and new amount would be updated in database for further transactions. If customer wants to keep track of his/her monthly consumption of eatables from canteen then he/she can log in through website with their unique ID provided and password. If customer is out of money then he/she can get their account recharged from administrator. The administrator of this system would have highest level privileges like he/she could add/delete users, also add/delete administration in charge and would have information of every user on system. This project addresses the problem of handling coupons for months and reduce crowd in canteen counter.

Acc.No: PR1737

Title : Multi-Directional License Plate Detection by Effective Machine Learning

Author:Amit Shukla, Darshan Shingare, Chandresh Vishwakarma, Nitesh Vishwakarma

Project Guide: Mr. VAQAR ANSARI

Abstracts :Automatic license plate recognition system is a technology which uses the Image Recognition Process to recognize the alpha numerical on the license plate of the vehicle. This can be achieved by using High Resolution Cameras to detect the License Plate characters. The camera can be mounted at a particular position from where clear image of the License Plate can be obtained and is sent for further image processing using PYTHON. Infrared Cameras are also used to take the image of the License Plate at any time of the day for or even a camera with a flash can be used for better illumination of the License Plate. Even high resolution color cameras can be used to get the job done. This technology tends to be region specific, owing to plate variation from place to place. This process is totally automated, requiring no officer intervention and taking less than a second to perform. The most noted use for ALPR systems is to locate stolen license plates and vehicles. It can also act as a surveillance device. One of the major drawbacks that is seen in this technology is the cost factor. The future of ALPR systems is seen as a change in the way law enforcement will conduct business.

Acc.No:PR1738

Title : Monitoring of a Bridge using Wireless Sensor Network

Author:Nikhil Tiwari, Vivek Sharma, Hiren Vardoria, Natasha Shinde

Project Guide: Ms. Kavita Sakhardande

Abstracts :Bridges are essential links in any surface transportation network. A damage to an important bridge may result in enduring economic loss due to partial or complete closure of the route in addition to the cost of repair or replacement. This project aims to implement a Wireless Sensor Network that monitors different components which tend to cause damage to the bridge. The sensor node monitors the bridge height from the base, the vibration of the bridge and also a fire sensor to detect any fire in case of an accident. The traffic on the bridge can also be monitored to avoid any unnecessary clustering of cars creating load on bridge and hence avoid the damage to the bridge. The sensor nodes on the sensor field would process the information gathered and communicate it with the other nodes and the base station. Thus the corrective measures can be taken to avoid the damage to the resources and life.

Acc.No: PR1739

Title : Automatic Railway Gate Control and Accident Alert

Author:Priyanshu Pal, Sonu Prajapati, Sujeet Prajapati, Majidali Pawar,

Project Guide: Dr.Uday Pandit Khot

Abstracts :The objective of this project is to provide an automatic railway gate and accident alert at a level crossing replacing the gate operated by the gatekeeper and to avoid accident. The system reduces the time for which the gate remains closed. This type of gate can be employed in an unmmaned level crossing where the chances of accident are higher and reliable operation is required. The system work on a micro-controller based control. We are using Arduino for this project with IR sensors. The arrival and leaving of the system are monitored and the gate is operated accordingly while the obstacle at railway crossing is operational once gates are closed.

Acc.No: PR1740

Title : Radiologist Level Abnormality Detection using X-rays

Author:Sumitkumar Singh, Abhishek Yadav, Yash Samant, Mohd. Akib Kamani

Project Guide: Mr..ALISTER D'SOUZA

Abstracts :Medical images such as MRIs, CT scans, and X-rays are among the most important tools doctors use in diagnosing conditions ranging from spine injuries to heart disease to cancer. However, analyzing medical images can often be a difficult and time-consuming process. We trained an deep learning algorithm that can detect abnormality present from the X-rays and give the visual mask of the location of the abnormality present within the x-ray. The accuracy of the prediction varies between 60 to 76 percent for 7 different classes namely hand, elbow, shoulder, humerus, finger, forearm, and wrist. The AUC and confusion matrix of the respective classes were plotted and the model was trained on VGG16 Architecture.

Acc.No: PR1741

Title : Smart Home Security System

Author:Pranita Jaiprakash, Shaarvi Sanjan, Smriti Maurya

Project Guide: Ms.SNEHAL LOPES

Abstracts :Security has been becoming an important issue everywhere. Every person wants his home, industry, bank etc to be secured. Home security is becoming necessary, as now days the possibilities of intrusion are increasing day by day. In this paper, a new system is designed which would control the door through an application without any complexity. It's very convenient and serves as a plug and play system. The user can see from anywhere in this world that who is at his door steps. The system keeps a picture of the visitor as evidence that would be needed if any unwanted situation occurs like stealing, robbery etc. The user can control the door with a single command through an application in mobile, pc, tablets etc. This system can also be used for industrial automation wirelessly. Also for any kind of accident like fire, or stolen keys the door can be opened by a single and simple command. As a result

the security is confirmed also the mental peace. The application also provides many more features.

Acc.No: PR1742

Title : Self Driven Car Aiding Emergency Services

Author:Pratik Shah, Akshita Sharma, Navina Sudhakaran

Project Guide: Ms.KAVITA SAKHARKANDE

Abstracts :Self -Driven Car With Emergency Aid can be used to solve the problem of people who need help during emergency situations and cannot drive themselves to the nearby help centers. The Self-Driven Car consists of features like obstacle detection and edge detection. The entire procedure also consist of traffic control mechanisms that controls the traffic of roads through which the car travels so that there aren't any mishaps that occur due to delay. Firstly, the mechanism of the self-driven car is discussed. Secondly, the traffic control mechanism is studied. This model being a prototype, we have determined fixed paths through which the car would travel in case of emergencies. The results obtained are in close agreement with those reported in the literature.

Acc.No: PR1743

Title : Smart Wireless Parking System based on Wireless Sensor Network

Author:Mayuri Prabhu, Varun Rege,Smit Patil, Akash Pantawane

Project Guide: Mr. Ramjee Yadav

Abstracts :With the rapid proliferation of vehicle availability and usage in recent years, finding a vacant car parking space is becoming more and more difficult. Parking problems are becoming ubiquitous and ever growing at an alarming rate in every major city. Wireless Sensor Network (WSN) technology has attracted increased attention and are rapidly emerging due to their enormous application potential in diverse fields. This buoyant field is expected to provide an efficient and cost-effective solution to the effluent car parking problems. This project proposes a Smart Parking Management System based on wireless sensor network technology which provides advanced features like remote parking monitoring, automated guidance, and parking reservation mechanism. Our preliminary test results show that the performance of this WSN based system can effectively satisfy the needs and requirements of existing parking hassles thereby minimizing the time consumed to find vacant parking lot, real-time information rendering, and smart reservation mechanisms.

Acc.No: PR1744

Title : Handwritten Character Recognition using Machine Learning

Author:Riddhi Pandya, Yashwita Suvarna, Dhaval Patel, Parth Patel

Project Guide: Ms. PALLAVI PATIL

Abstracts :In India, most government documents are handwritten forms with Devanagiri script. Devanagiri manuscripts are a rich source of knowledge about Science, Mathematics, Hindu mythology, Indian civilization, and culture. It therefore becomes critical that access to these manuscripts is made easy, to share this knowledge with the world and to facilitate further research on this literature. In this paper, we propose a Convolutional Neural Network (CNN) based Handwritten Character Recognition system which accurately digitizes Devanagari Script that are not necessarily in good condition. CNN has recently been used as an efficient unsupervised feature vector extractor. This network can be used as a unified framework for both feature extraction and classification. The novelty of CNN is its robustness to image quality, dataset size, which makes it an ideal choice for digitizing soiled and poorly maintained manuscripts. We have developed multiple networks using the same approach but different parameters and have obtained a maximum accuracy of 98.24 % using this methodology.

Acc.No: 1745

Title : Traffic Control System using Image Processing

Author:Ssapan Patel, Varis Patel, Harsh Patel, Mayank Sindhwad

Project Guide: Ms. Pallavi Patil

Abstracts :Present day traffic signals are not dynamic, i.e. they do not take into account the changing nature of traffic on different streets at a particular junction and this leads to an unwanted delay for commuters as well as waste of fuel. In some metropolitan cities, cameras are already mounted on the traffic signals to have a watch on traffic violations. We propose to use the same traffic camera feed to dynamically adjust the traffic timers of that particular junction. So, our system monitors the traffic congestion on all the streets at a junction and updates the timer as per the current scenario of traffic density. . To do this we feed the video input from all the streets of a junction to a central processor and it uses image processing to analyse the traffic situation by getting a count of number of vehicles and this count is used to compare the congestion between the different streets of a junction. Depending on the same, subsequently the timers will be updated.

Acc.No: PR1746

Title : Drone Control Using Hand Gestures

Author:Rajat Nayak, Rohit Pai, Samson Pandidhar, Aditya Pandita

Project Guide: Mr. KEVIN DSOUZA

Abstracts :Commercial drones are becoming increasingly popular with new ones being introduced regularly as well as new methods and devices to control them. This report details an attempt to utilize gestures to control drones without using other means concurrently such as a joystick. During the length of the project several approaches were assessed in terms of

suitability for the aims of the project. Consequently, the most appropriate techniques and technology was chosen from the available options. This led to the attempt being mostly successful in meeting the initial aim although with some problems and unachieved objectives

Acc.No: PR1747

Title : Microstrip Patch Antenna Loaded with Metamaterial for Wireless Applications

Author:Aniket Ramji, Chetan Rajput, Bhagyalaxmi Sawantdesai, Sagar Sahane

Project Guide: Mr.SWAPNIL CHILAP

Abstracts :A significant gain triple band patch antenna loaded with a new modified double circular slot ring resonator (MDCsRR) metamaterial unit cell is presented in this project. New MDCsRR is a compact low frequency slot ring resonator. The principle of the proposed patch antenna element is based on adding series capacitance to decrease the half wavelength resonance frequency, thus reducing the electrical size of the proposed patch antenna. The transmission line model is used to analyze passband and stopband characteristics of the radiating bands. Circulating current distribution around MDCsRR slot with increased interdigital capacitor finger length causes multiple modes to propagate.The MDCsRR metamaterial unit cell consists of a new modified circular slot ring resonator (MCsRR) with metallic strip finger. The proposed structure is compact in size with radiating element dimensions of $0.27\lambda \times 0.27\lambda \times 0.0083\lambda$ at first resonating frequency. The proposed antenna offers triple band operation with significant calculated antenna gain of 2.77 dBi at first center frequency of 3.2 GHz, 4.83 dBi at second center frequency of 5.4 GHz and 6.14 dBi at third center frequency of 5.8GHz. The electrical size of the proposed antenna is miniaturized by about 69% as compared to the conventional patch antenna operating at first resonating frequency.

Acc.No:PR1748

Title : Metamaterial Based Dual Band MIMO Antenna

Author:Bhavesh Solanki, Nikita Shelar, Kunal Thakkar, Minakshi Suryawanshi

Project Guide: Ms.ANJALI CHAUDHARI

Abstracts :A four-element dual-band MIMO configuration consisting of split-ring resonator (SRR)-loaded inverted L-monopole antenna elements is realised .In the proposed antenna, the lower-frequency mode of the unloaded MIMO configuration merges with one SRR-induced antenna resonance. This leads to antenna operation around 2.93 GHz with wide impedance bandwidth (IBW) of 35.21%, encompassing the lower WLAN, worldwide interoperability for microwave access ,wireless fidelity, fourth generation (4G)-long-term evolution and sub-6 GHz 5G bands. Furthermore, due to SRR loading, the proposed MIMO antenna exhibits a resonance at 5.68 GHz (IBW 6.86%), covering the upper WLAN band. Minimum inter-element isolation of 14 dB is achieved, in spite of the compact total area (0.103l20, $\lambda 0$= highest operating wavelength) and the presence of inter-connected ground plane. Both the working bands exhibit directional radiation patterns with average gain ≈ 4 dBi. Experiments

on the fabricated antenna prototype confirm that the simulated and measured S-parameters, radiation patterns (envelope-correlation coefficient, channel capacity loss and total active reflection coefficient) are in good agreement.

Acc.No:PR1749

Title : Obstacle Avoidance System using Fuzzy/Neural Logic

Author:Sandeep Sharma, Prabjyot Singh, Ashish Singh, Bhupendra Singh

Project Guide: Dr. Uday Pandit Khot

Abstracts :Due to rapid increase in population as well as their vehicular traffic there has been a huge rise in collision of such vehicles. These accidents or collision are sometimes life threatening one, thus measures have to be taken and implemented for the same. The proposed project is a step to avoid such kinds of accidents. Since the reason for collision in most cases was inattention of the driver due to long and exhaustive drive. Obstacle Avoidance System which works based on fuzzy logic gives support to the driver by avoiding obstacles which can come in its way by either changing the path or by reducing the speed of the vehicle. Therefore, the target goal is achieved by having this system implemented in the vehicle.

Acc.No:PR1750

Title : Parasitically Loaded Circular Multiband Fractal Antenna

Author:Shawn Ohol, Punit Pandey, Sourabh Varma, Minal Sheth

Project Guide: Mr.INDERKUMAR KOCHAR

Abstracts :There are number of methods that can be used to reduce the antenna size. Fractal is one of the ways which can be used to miniaturize antennas due to their space filling ability. It helps in fitting large electrical lengths into small volume. Most of the researchers have obtained this reduction in length either by trial and error method or by viewing various performance parameters such as gain, bandwidth, return loss, reduction in area etc. at each iteration order and iteration factor. A low-cost fractal antenna loaded with parasitic edge-coupled (EC) split ring resonators (SRR) has been designed. Parasitic EC SRR elements have resulted in improved impedance matching leading to improved bandwidth. The basic resonant structure is a circular patch antenna designed at 3.2 GHz on low-cost FR4 substrate with relative permittivity 4.4, and 1.6 mm thickness. Multiple iterations of circular patch and slots is being used to make it fractal. In order to achieve multiband performance, the antenna is inset fed by a 50 Ω microstrip line. The antenna has been fabricated on an FR-4 substrate and tested using a suitable Vector Network Analyzer.

Acc.No: PR1751

Title : Design of UWB MIMO Atennas for Wireless Applications

Author:Vishal Patel, Ankush Patil, Neha Pawar, Rahul Rao

Project Guide: Ms. Jovita Serroa

Abstracts : This work focuses on the design of an Ultra-Wide Band MIMO antenna for wireless communication. UWB antennas offers bandwidth of 7.5GHz (3.1-10.6 GHz) with 110% of center frequency. It is the largest spectrum allocation for the unlicensed use by the Federal Communications Commission. The proposed antenna comprises of a circular radiating patch and a micro-strip feed line printed on the top layer of the substrate, while the ground plane with a corner reflector and L-stub are printed on the bottom layer. Our work focuses on to make this monopole antenna design into MIMO with low mutual coupling and several mutual coupling reduction techniques have been proposed to achieve high isolation. MIMO antennas have gained considerable amount of attention of many researchers since it's a compact antenna supporting various communication standards simultaneously. However, this compactness leads to mutual coupling which is a major concern in designing a MIMO antenna.

Acc.No:PR1752

Title : Microcontroller Based Gesture Recognition

Author:Sayali Nar, Pallavi Nibandhe,

Project Guide: Mr.SANTOSH CHAPANERI

Abstracts :In this project, classification of Fashion Accessories is done using CNN-Softmax and CNN-SVM. We have compared the CNN-Softmax model and CNN-SVM model for comparative analysis. In case of CNN-SVM model, it uses hinge loss function instead of the traditional Softmax Activation function followed by the cross entropy loss function. Result analysis was performed on both the models for classification of both MNIST and Fashion-MNIST dataset. Accuracy of almost 99% was observed for both the models in case of classification of MNIST Dataset, and in case of classification of Fashion-MNIST dataset accuracy of 91% was observed.

Acc.No: PR1753

Title : Via and Slot Loaded Patch Antenna with Improved Gain

Author:Sushmita Shrivastava, Shivani Upadhyay, Madhuri Yadav

Project Guide: Mr.Inderkumar kochar

Abstracts : A patch antenna with loading of slot and shorting pins is implemented in this project to enhance the radiation gain without increasing the patch size. A vertical slot is transversely introduced in the central line of a patch. For the dominant TM01 mode, this central line behaves as a virtual electric wall with zero electric field and maximum surface current underneath and on the patch, respectively. By doing so, the central slot serves as an

extra radiator so that this slot loaded patch produces radiation as an equivalent three-slot array. A pair of shorting pins is longitudinally placed at the two symmetrical sides of this central slot to maintain the resonant frequency. Simulation results indicate an increase in directivity by approximately 1.7 dB over the conventional square shaped patch. Both the conventional and the via-and-slot-loaded patch have been fabricated and their return loss performance has been measured using ZVH8 Vector Network Analyzer.

Acc.No: PR1754

Title : Dual Band MIMO Antenna for Mutual Coupling Reduction

Author:Adarsh Tiwari, Ruturaj Ukarde, Shreya Vaze, Rohan Vora

Project Guide: Mr.Sandip Dhende

Abstracts : A novel dual-band MIMO (multiple input, multiple output) antenna for WLAN (wireless local area network) applications is presented. The MIMO antenna contains two dual-band antenna elements, each of which comprises a T-shaped monopole and a stub resonator. Two operating bands with center frequencies of 5.5 GHz and 2.5 GHz are crested by the monopole of T shape and the stub resonator , accordingly. The stub also works as an isolation structure at the higher band, which can simplify the dual band isolation design into a single-band problem. Moreover, the isolation is enhanced at the lower band by inserting a metal strip which can cancel out original coupling, And DGS provides better isolation than plane ground. The inserted metal strip and Defected ground structure (DGS) are additional decoupling structure in this design and has a simple texture with a compact size. The measured and simulated results reveal that the designed MIMO antenna can cover all the 2.4/5.5 GHz WLAN operating bands and within the recommended bands the isolations exceed by 20 dB

Acc.No: PR1755

Title : Implementation of Trust Based Schenme for Secure and QoS routing in MANETs

Author:Mikhail Pinto, Roshan Bhatnagar, Anuraag Deshpande

Project Guide: Mr.Ramjee Yadav

Abstracts :With the rise of mobile devices over the past decade, small scale networks using ad hoc technology have variety of applications with no additional network infrastructure required. However, these networks are prone to malicious attacks that can cause network to fail. In this project, we attempted to implement a trust-based secure OoS routing scheme by combining social and OoS trust. Using network simulator-2 (NS2) we simulated various scenarios to show that mixing social and OoS trust parameters can greatly improve security and quality of service routing in terms of packet delivery ratio, delay and lifetime.

Acc.No:PR1756

CMPN

ABSTRACTS

Title : Soil Profile based Agricultural System

Author:NISHITA DESAI, ANKITA FERNANDES, SAMIKSHA RAHATWAL

Project Guide: Ms. Priya Karunakaran

Abstracts :Agriculture plays a vital role in Indian economy. Agriculture is considered as a primary means of livelihood for about 58% of the rural India. The green revolution which introduced various high yielding seeds and fertilizers undoubtedly leaded to increase in crop productivity. However, for the past 20 years scientific contribution in fields of agriculture is low compared to the technological inventions in services and manufacturing industries. Agriculture is now currently 15% of GDP as per Government of India Statistics. Indian farmers still follow the traditional way for selecting crops for cultivation which was passed onto them by their ancestors.

In many regions in India, farmers face problems of crop production due to soil and weather conditions. There is no proper guidance available to assist them for cultivating appropriate type of crop using modern technologies. Owing to illiteracy, farmers might not be able to take advantage of scientific advances made in the field of agriculture and still adhere to traditional practices. This makes obtaining desirable yields difficult. For instance, crop failure can occur due to improper use of fertilizers or undesirable amounts of rainfall. In such situations, an adequate solution could be to choose crops for cultivation that will be well suited with current soil quality and probable expected rainfall during cultivation. Therefore, we introduce the 'Soil Profile Based Agricultural System', based on data mining. We provide a list of crops a farmer can cultivate based on inputted soil attributes (NPK and pH) and rainfall of farmer's region. In addition to this, it also suggests fertilizers that can be used to improve soil quality and thus bring more crops under successful cultivation. This Android application is developed to solve the growing problem of crop failure.

Acc.No: PR1670

Title : Asynchronous based Chatroom system

Author:SHONAN GOMES , DYLAN RODRIGUES, ARNOLD DSOUZA, ASHWINI NAIK

Project Guide: Ms.Flevina Dsouza

Abstracts :There are many chat applications that are synchronous. Due to synchronism the chat application becomes slow and blocked. In order to enhance the speed, and overall performance of the project we are making use of Asynchronism(a brand new way of coding with better constructs) with the help of the node framework. So basically we are extending

the node framework. Besides, node is a programming framework that uses multithreading internally. If we used multithreading by ourself we may have to take into consideration many factors such as shutdown activities, handling of many threads,etc. If we do not take into consideration such factors our program may crash or will work inefficiently. Node takes care of performing all these multithreading activities. The programming language for node is javascript. Users will be able to communicate at a faster rate. One could use this project as a stock exchange platform where transactions are performed instantly. No user or data will be blocked. Our project uses end to end encryption to deliver the message from one user to another.

Acc.No: PR1671

Title : Customer Behaviour Prediction using Web Usage Mining

Author:CAROLINE LOPES, RIYA DODTHI, AVRIL LOPES

Project Guide: Ms.Snehal Kulkarni

Abstracts :With the expeditious growth of e-commerce or the web-based marketing system, the Internet has become the most important media for understanding consumers. Marketing managers seek to gain significant insights on consumers' web navigation behaviour allowing them to identify the most important visitors and hence derive customized marketing strategies. Hence such a methodology that allows the analysis of web data and deduction of insights would be invaluable. Web usage mining involves first recording behaviour and flow of customers on a website and then mining through this data for behavioural patterns. Ecommerce sites analyse this data in order to provide better performance and also suggest better products and services to customers. The system is tuned to record web shopping/buying patterns and tracks various analytics data.

Acc.No: PR1672

Title : Assisted Driving

Author:ASHLEY MASCARENHAS, PRAVEEN FERNANDES, ACVIN GONSALVES, SANFORD MASCARENHAS

Project Guide: Ms.Nidhi Gaur

Abstracts :One serious road accident in the country occurs every minute, and 16 die on Indian roads every hour. Automobile collision avoidance systems operate under the principle that even if the human makes an error and creates a circumstance where a crash is unavoidable, with the right corrective measures the severity of an accident can be reduced. Collision avoidance systems use sensors and other parameters that are capable of detecting obstructions in front of a moving vehicle. It may then issue a warning to the driver or take any number of direct, corrective actions. The collision avoidance system may also pre-charge the brakes in conjunction with an automatic braking or emergency brake assist system. That can provide the driver with a substantial amount of braking power. In case the user does not respond to the warnings and the systems determines that a collision is imminent, it will actually engage

the brakes. Monitoring and effective use of this data can reduce a potentially dangerous drivers effect on his surroundings. With real-time analysis and auditory alerts of these factors, we can increase a driver's overall awareness to maximize safety.

Acc.No:PR1673

Title : Intelligent Interactive Supermarket System

Author:DHRUVIL SHAH, AASHNA SHAH, VANISHA RODRIGUES, PRIYAM THAKKAR

Project Guide: Ms.Safa Hamdare

Abstracts :Supermarket Shopping is done by everyone but a lot of time is wasted while searching through the items in supermarket. Locating the items on our list and even finding the best route to locate all items on our list is a big task and very time consuming.

Our system proposes to solve this problem using inbuilt sensors on a smartphone such as gyroscope and magnetometer. These sensors help in detecting user's current location using the phones GPS and the user's heading direction. The location of all the items on our list in a supermarket is calculated using a path-finding algorithm called A* algorithm.

These two parameters – User's location and Item's location are used as inputs in finding the smallest route that covers all the items on the list from user's current location till the exit. We propose the use of an Android-Based smartphone in this project for positioning the user and then mapping a route to find all the items on a user's list in a supermarket.

Acc.No:PR1674

Title : Target treatment of viral diseases

Author:GLEN VEIGAS, GLORIA PINTO, CELESTE TAVARES

Project Guide: Mr.Rupesh Mishra

Abstracts :Viral infectious diseases represent an important portion of global public health concerns with thousands of deaths annually. A more robust, adaptable, and scalable infrastructure would improve the capability to respond to epidemics.

The emergence of technology has affected various aspects of our lives. Making human life better and helping it flourish has always been the objective of both medical science and technology. In order to accomplish this goal, the collaboration of technological advances and medical field has become necessary.

This project is implemented with the aim of saving lives of Ebola patients by giving them the right vaccines based of the amount of damage caused which is not the case currently. People infected with Ebola virus die early sometimes due to the wrong doses of vaccine. Ebola virus (EBOV) belongs to the family Filoviridae and cause severe hemorrhagic fever in humans and nonhuman primates. Ebola follow a different path and structure, rather than multiplying itself in a chain reaction, the virus follows a circular path along the edges of the cell until it reaches

the nucleus of targeted cell, the flow and expansion is considerably quicker in the earlier stages.

To prevent the loss of life, we have developed a system capable of using Machine Learning techniques to detect the amount of damage in the organs of Ebola infected patients. This is achieved with the help of Image Processing and Unsupervised Learning Techniques.

Acc.No:PR1675

Title : License plate recognition using Machine Learning

Author:JORDAN DIAS, OSBAN CEREJO, MARK DSOUZA

Project Guide: Ms.Supriya Solaskar

Abstracts :In recent times, the buildings that are built, have their first few floors dedicated for parking. Some private buildings only allow registered vehicles to enter the private parking lot. It becomes necessary to keep a track of incoming and outgoing cars.

Problem arises for busy parking areas such as malls and cinemas. Also, maintaining a registry becomes tedious for a human because it is needed to maintain the timestamps of incoming and outgoing cars. We generally focus on two steps; one is to locate the number plate and second is to segment all the number and letters to identify each number separately

Acc.No:PR1676

Title : Melanoma Detection using Image Processing and Machine Learning.

Author:GAVIN D'SOUZA, ODION FERRAO, SWAPNIL HOSKATTI

Project Guide: Dr.Kavita Sonawane

Abstracts :Automatic diagnosis of skin cancer is one among the most challenging problems in medical image processing. It helps physicians to decide whether a skin melanoma is benign or malignant. So, determining the more efficient methods of detection to reduce the rate of errors is a vital issue among researchers. This automated diagnosis follows three important phases pre-processing, feature extraction followed by classification or detection. Proposed system is focusing on the same flow with the application of thresholding-based segmentation to identify the Region of interest (ROI) and image enhancement as part of preprocessing. Color and texture contents are the main focus along with the geometry features in the second phase to strengthen the features. Machine learning is a promising field which is considered state of the art for providing data insights. Thereby the application of emerging machine learning approaches for the classification and detection fulfil our purpose with desired accuracy in the detection. Proposed system is experimented with the dataset provided by the International Skin Imaging Collaboration (ISIC) Archive. Performance of the proposed model is evaluated using performance factors such as accuracy, precision, recall and f1 score. We identified that logistic regression gives the best results with the combined feature vectors.

Acc.No:PR1677

Title : Hybrid Recommendation System for Movie Recommendation

Author:FLAVIA LOPES, SUCHITA DSOUZA, RENCY MARTI

Project Guide: Ms.Varsha Nagpurkar

Abstracts : The project aims at building Hybrid movie recommendation system which is capable of displaying list of favorable movies to the registered user. System makes use of combination of collaborative and content-based filtering to make recommendations. Hybrid movie recommendation system overcomes the drawbacks of individual content based filtering and collaborative based filtering to provide accurate recommendations to the user. Our project aims to reduce the response time of the system using an optimization algorithm to produce a more accurate and efficient system. The system will have a web-based application where user can browse through various movies, watch their trailers, rate them and then get recommendations based on their watch and search history.

Acc.No: PR1678

Title : Smart Driver Alert System using Image Processing and Neural Networks

Author:MARICA D'SOUZA, SHWETA D'SA, KENNETH CHUNGATH, JASON BRITTO

Project Guide: Ms. Dakshata Panchal

Abstracts :Automated driver assistance has paved the way for intelligence on roads. Detection and Recognition of road signs is an integral part of this whole field. Road signs are important to ensure smooth traffic flow without bottle necks or mishaps. Ignorance on the driver’s part can lead to catastrophic accidents for both the driver and pedestrians or other passengers on the road. This project presents an overview of the traffic sign board detection and recognition process and implements a procedure to extract the road sign from a natural complex image, processes it and alerts the driver using voice command. It is implemented in such a way that it acts as a boon to drivers to make easy decisions. It proposes an effective way to alert distracted drivers. The system has detection and classification as its two core modules. In the detection module, colour segmentation and thresholding techniques are used to confirm that the captured frame contains a road sign. On confirming, the ROI is then used as an input to the neural network in the classification module. The system will then alert the driver with a voice output. A total of 7 signs are used for training and testing purpose, which are prominent on the streets of Mumbai.

Acc.No:PR1679

Title : Campus AR App for visitors

Author:SHREYA PRABHU, SNEHAL KASHID, SANIYA FURTADO, MRUNMAYI PATIL

Project Guide: Ms.Sweedle Machado

Abstracts :In recent times, the role of technology in education has increased substantially. Primarily, students rely on official information displayed on college websites and social media accounts. In India, most colleges lack a precise building map often resulting in visitors being unaware of the location of the admission enquiry desk, principal's office etc. With the burgeoning technology of augmented reality, this paper proposes solutions to solve the problems faced by the students and visitors through its three prominent features of real-time information and navigation. Moreover, we propose and simulate an augmented reality with navigation technology application for St. Francis Institute of Technology that overlays the campus information on real-world images, making campus experience more precise, interactive and convenient. The project investigates image retrieval and navigation technologies and realizes the campus internal navigation on a mobile phone. The system makes navigation technique in the local application more exact, humanized and convenient.

Acc.No:PR1680

Title : Voice control smart home using Raspberry Pi and Bluetooth module

Author:CLIVE CRASTO, SHONIL DABREO, MARK PEREIRA, BLAISE RUMAO

Project Guide: Ms.VINCY JOSEPH

Abstracts :Home automation means controlling of home functions and features automatically and sometimes remotely using one or more computers. An automated home is also called as a smart home. Speech based home automation uses human voice commands to operate the electrical appliances in the home. It is very useful for human beings especially for elderly and physically handicapped people. We present the implementation details of a schemes for speech based home automation and control. The scheme uses the Bluetooth technology for controlling of electrical appliances when we are at home. It uses a HC-05 Bluetooth module and Android Bluetooth controller mobile application for switching on or off the appliances. The aim of this project to develop a system that will voice control the home appliances and also provide security. It is used to save the electric power and human energy. This project is made with help of Raspberry Pi 3 and Relay driver circuit and Bluetooth module. The various appliances are connected to the relay circuit and the microphone connected to Raspberry Pi 3. After successful recognition of voice command the Raspberry Pi 3 drives the corresponding appliances. Voice recognition is developed by using Google API's.

Acc.No:PR1681

Title : Bank Locker Security System based on RFID and GSM Technology

Author:JUSTIN MIRANDA, ASHLEY RODRIGUES, PRINCETON DALMET

Project Guide:Rajrumar shende

Abstracts :In today's materialistic world, security holds an indispensable place. There is a need of security in almost every sector of society viz. offices, houses, banks etc. as thefts and

robberies are increasing day by day. To overcome this security threat, a security system has been proposed using RFID (Radio Frequency Identification) and GSM technology. An access control for doors forms a vital link in a security chain. By using this system we can unlock the door by using pre-decided password, increase the security level to prevent an unauthorized unlocking. In case the user forgets the combination of password this system give the flexibility to the user to change or reset the password. This automatic password based lock system will give user more secure yet cost-efficient way of locking-unlocking system. The microcontroller based Door locker is an access control system that allows only authorized persons to access a restricted area. The system is fully controlled by microcontroller which is interfaced with peripherals like RFID,4*4 keypad, GSM, LCD, DC Motor. When the user show the RFID tag in front of the RFID reader, the RFID reader read that and it will give to the microcontroller. The microcontroller sends the password to the user mobile phone through GSM in the form of SMS which is stored in to the TAG. Then only the user entered the password through keypad so the microcontroller checks that and gets open/close the door. Any wrong password enters through keypad alert through buzzer. Status will display on LCD. Here we are using H-Bridge to open/close the door through DC motor. Here we are using DC motor instead of door.

Acc.No:PR1682

Title : Smart Parking System for Vehicles

Author:VISHAL HARSORA, SHALIN RUPAREL, ATHARV PARANJAPE

Project Guide: Ms.Snehal Kulkarni

Abstracts :Among the challenges that we face in our day to day life one of the most unavoidable challenge is parking our car wherever we go. As our need increases our travelling increases but due to drastic increase in usage of vehicles and increase in population we face the tough task of parking our car particularly during the busiest hours of the day. During peak hours most of the reserved parking area gets full and this leaves the user to search for their parking among other parking area which creates more traffic and leaves them with no indication on the availability of parking space. To overcome this problem there is a need of a designed parking in commercial environment.

The main aim of this system is to easily manage or reduce the parking problem by using a smart way of parking. The driver does not have to manually search each and every Parking lot for parking his/her vehicle. By using our proposed system a driver can easily navigate through the Parking area for free slots. It is one of the most efficient method for solving the parking issues in the multiplexes, hotels, shopping malls, etc. The system will be able to show the user whether a vehicle is parked in a particular slot or not. This will be done by showing the user a 2D layout of the Parking area and all the slots within it. When the slot is empty i.e. when the slot is available, that slot will show GREEN color in the App. When a car is already parked in a particular slot, the RED color will define it and also when the slot is just reserved to be used by another user, it will be shown RED. This working will also be displayed on the screen at particular entrances to the users who do not use the App.

Acc.No:PR1683

Title : Performance evaluation of employee using data mining and opinion mining

Author:SHREYA PARIKH, VELITA TAURO, AURIEL PEREIRA

Project Guide: Ms.Sweedle Machado

Abstracts :In recent times, the role of technology in education has increased substantially. Primarily, students rely on official information displayed on college websites and social media accounts. In India, most colleges lack a precise building map often resulting in visitors being unaware of the location of the admission enquiry desk, principal's office etc. With the burgeoning technology of augmented reality, this paper proposes solutions to solve the problems faced by the students and visitors through its three prominent features of real-time information and navigation. Moreover, we propose and simulate an augmented reality with navigation technology application for St. Francis Institute of Technology that overlays the campus information on real-world images, making campus experience more precise, interactive and convenient. The project investigates image retrieval and navigation technologies and realizes the campus internal navigation on a mobile phone. The system makes navigation technique in the local application more exact, humanized and convenient.

Acc.No:PR1684

Title : Home Automation using hand gestures

Author:YASH RAORANE, HARDIK PATEL, RENITA FERNANDES, MEENU GIGI

Project Guide: Ms.Sneha Nikam

Abstracts :With the boost in technology, human-machine interfaces are constantly advancing. The ease of usability of any appliance is paramount. The classic way of controlling any home device requires, hands-on a switch or a remote. The system aims at designing a basic home automation system with the help of hand gestures. It provides an aid in the usability of appliances, by bringing a technological change in the way we control them. The proposed system consists of a wristband with an LCD for the device-selection and a sensor for capturing the gestures, and thereby combines the measurement of mechanical activities produced by the movement of the wrist and detects the gesture. Once the gesture has been detected, the desired functionality of the corresponding device gets activated. This proposed system serves to be of great benefit for the elderly and the disabled, by providing them with flexibility to operate home appliances without any external help.

Acc.No:PR1685

Title : TV Series recommendation system

Author:RASHLIN DABRE, ELISON TUSCANO, AMBROSE TUSCANO

Project Guide: Ms. K. Priya Karunakaran

Abstracts :With the development of the Internet and increasing information overload, personalized Recommender systems become more and more important and useful for both consumers and business. The main aim of a recommender system is to predict consumers' preferences based on implicit feedback or explicit feedback, or both of them and recommend the most favorite items which are likely to be in consumers interest. From the consumer's point of view, recommender systems can help them find information or preferable products faster and more accurate than a system without recommender. On the other hand, from businesses/provider's point of view, they can benefit from recommender systems in terms of revenue, attracting consumers, obtaining users' trust and loyalty and so on. TV program recommender systems are one important application of personalized recommender systems. With the development of Smart TV and expansion of TV program/contents, hundreds of channels from cable or satellite provider, along with great Internetbased content providers like Netflix, Hulu, YouTube, are available to users. The tremendous TV program/contents, on one hand, may bring users many choices; on the other hand, users may sometimes feel confused and it is not easy to find interesting TV program because of the massive amounts of the TV program. Our TV SERIES recommendation System, contains three components TV program content analysis module, user profile analysis module, and user preference learning module.

Acc.No:PR1686

Title : Automated IOT based system for home automation and prediction of electricity Usage

Author:ALRIC MENDONSA, KEVIN SAJAN, JOEL ANTHONY

Project Guide: Ms.Varsha Shrivastava

Abstracts :In this era of automation and internet, most of the things in our locality or workplace are operated automatically with minimum human intervention. We have come across systems where it is operated only by a hand gesture or by just saying it to do things and it does it. In this paper we focus on home automation using internet of things (IOT). It provides a platform that allows devices to connect sense and control other electronic devices remotely across a network infrastructure. We also prioritize energy consumption of each user so as to control and monitor excessive use of energy. Our proposed system will be helpful in conserving a great amount of energy if used in industries and other high energy consumption sectors. Our approach is to predict the electricity bill of a user by calculating its daily consumption of energy and estimating what could be the user's electricity bill at the end of the month. We planned to use an Arduino board and relay circuitry which will be connected to each and every device. A website will be developed, where user can directly login and receive the information about energy consumption by all the devices. And through this application the user will receive notifications regarding abnormal behavior of the devices, electricity bill assumption etc.

Acc.No:PR1687

Title : Youtube Video Popularity Prediction System

Author:STEEVEN PEREIRA, MAXIL RODRIGUES, BLAISE RODRIGUES

Project Guide: Mr.Shamsuddin S. Khan

Abstracts :YouTube, with millions of content creators, has become the preferred destination for watching videos online. The site allows users to upload, view, rate, share, add to favorites, report and comment on videos. Consuming and watching videos in YouTube is an integral part of our daily lives. Through the Partner program, YouTube allows content creators to monetize their popular videos. Of significant importance for content creators is which meta-level features (e.g. title, tag, thumbnail) are most sensitive for promoting video popularity. The popularity of videos also depends on the social dynamics, i.e. the interaction of the content creators (or channels) with YouTube users. Predicting videos popularity is of great importance for many services and application ranging from supporting the design and evaluation of a wide range of systems, including the targeted advertising to earn more money, ensure an effective search and recommendation systems, and design an effective caching system. This encourages researcher to analyze and devote much interest to popularity prediction in these platforms. We created the prediction model using data of past videos ranging from 2010 to 2018. The data-set was obtained from past videos by web scrapping using YouTube's API. The dataset provides a list of 20k-25k YouTube video ID's for the past 10 years. After pre-processing the data-set the data was split into training and testing data. 70% of data is used for training and 30% is used to test the accuracy of the model.

Acc.No:PR1688

Title : Web Tool Belt

Author:KEVIN THOMAS, KAVIL SIDDHARTH, KESARKAR KOMAL

Project Guide:Ms.Jayashri Mittal

Abstracts :Internet is home to millions of websites. Over the years it has become a race to gather more users onto your website for obvious reasons. But as a matter of fact, only few of them flourish, and many are still lying on their hosts, hoping for a plethora of users to visit their websites. Most of these website owners are not able to identify the reason behind their unsuccessful nature in spite of having all the necessary features like good product/service, amazing team, advanced tools, etc. It is something that is overlooked many a times that makes a website less competitive than the others.

Websites are the reflection of your business in the digital world. It displays your service or product's features to worldwide users. If the website can be analysed and a result of its online presence can be obtained in a portable fashion, it will allow the administrator to make suitable and profitable changes to its website. This will not only help the administrator to optimise the website, but also beautify its approach to its end users.

Thus, the following project is a website used to provide features such as web-analysis which let the user & developer know about a particular website. A live-chat system which provides a platform for interaction between user and developer converting users into customer .

Uptime checks to check for availability of the site on the net. Code snippets provision to modify and beautify and optimize a site accordingly.

Acc.No:PR1689

Title : Controlling music player using hand gestures

Author:RODRIGUES KEVIN, RODRIGUES OSDEN, LOPES JONTY, D'MELLO ONISH

Project Guide: Ms.Shobha Tyagi

Abstracts :Gestures are a major form of human communication. Hence gestures are found to be an appealing way to interact with computers, as they are already a natural part of how we communicate. A primary goal of gesture recognition is to create a system which can identify specific human gestures and use them to convey information for device control and by implementing real time gesture recognition a user can control a computer by doing a specific gesture in front of a video camera linked to the computer. The system is built to identify specific human gestures, and then use them either to convey information or to control a device. The gestures used have to be intuitive, simple and universally acceptable to ensure they are easily adopted by users. This project aims to develop a gesture recognition system for presentations. Gesture recognition technology leads to touchless interactive displays, point and click presentation systems and mouse replacement solutions. It utilizes advanced computer vision and body tracking software to convert simple hand movements into direct mouse control in any environment.

Acc.No:PR1690

Title : Detection of Potholes using Image Processing

Author:LEMOS AARON, GONSALVES PRESTON, RUMAO VIANA, DABRE PRIYESH

Project Guide: Mr.Jerin Thankapan

Abstracts :Roads with potholes have become nearly universal in India. In fact, it has become second nature for drivers to swerve through lanes to avoid potholes, which causes nearby vehicles to also panic. This application is aimed at solving such issues.Potholes though seem inconsequential, may cause accidents resulting in loss of human life. In the proposed system we present an automated system to efficiently manage the potholes in a way by deploying geotagging and image processing techniques that overcomes the drawbacks associated with the existing survey-oriented systems. Image processing is used for identification of target pothole regions in the images using object detection. This will further enable the government official to have a fully automated system for effectively managing pothole related disasters.

Acc.No;PR1691

Title : Vocabship: An AR based Game for Learning English

Author:JYOTI BANGAR, SYED SAMIUDDIN, FLOYD D'SILVA

Project Guide: Ms.NIDHI GAUR

Abstracts :This project is a Augmented Reality based shooting game with integrated quiz for English. The main objective of this game is to help people improve their language in a fun learning way. This will mostly help kids as they find the traditional methods of reading, writing, etc. very boring. This game is a plane shooting game in which the player will be given a question and will have to shoot the plane tagged with correct answer. Many modes and levels will be available for the player to choose from. After completing the game, result will be displayed along with the correct answers to incorrectly attempted questions so that the user can rectify his mistakes and also learn something new.

Acc.No:PR1692

Title : Real Time Management System for Customs

Author:JIBIN THOMAS PHILIPOSE, BEN CHERYAN ZACHARIAH, D'SOUZA IVAN NAVIN WALTER

Project Guide: Ms.Flevina D'souza

Abstracts :In a day there are more than 500+ flights which land in the international airport, so generally there are lots of passengers who enter with precious goods worth more than 50,000 Rs which is not allowed as per the law. The customs step in during these instances and fine such passengers with additional taxes or seize the goods if the passenger isn't willing to pay the amount. This process of seizing or fining is a big procedure with the involvement of various government laws and legal documents, which is currently being done manually by the officers in big registries. To make this work easier and manageable a digitized architecture would be more feasible and cost-effective way of managing things in a less error prone way. With this system in place all an officer will have to do is input some details about the goods and passenger and rest of the work is automated by the system by calculating tax and accordingly generating receipts for the customs as well as the passenger, and if the goods are detained by the customs then warehouse assignment is done for the particular goods by categorizing it further low valued or high valued goods.

Acc.No:PR1693

Title : Decentralized Healthcare System using Blockchain

Author:ANALIN JETSO JERALD, ARANHA OSHIN ROMALD, KANNANAIKAL ANMOL JAYAN, JOSEPH JOANNA JOSEPH

Project Guide: Mr.Rajkumar Shende

Abstracts :Innovations for Electronic medical records (EMR) have slowed down in recent times. The increased data availability and artificial intelligence advancement has made

opportunities that can be explored in healthcare. Presently patients do not have access to their own medical records and remain unaware of the importance of data. We simulate a decentralized custom private blockchain enabled healthcare data network to make easy approaches for preventive healthcare. A secure and transparent distributed personal data marketplace using blockchain can resolve challenges faced by regulators of a healthcare system and return control over personal data including medical records back to individuals by placing data on blockchain-enabled system to simplify transactions and enable innovative novel schemes. We encourage medical collaborators to participate in the medical network as blockchain miners (validators). This will provide them mining rewards, in return for sustaining and securing the network via Proof of Authority, as well as providing rewards to the patients for enabling access to their medical records.

Acc.No:PR1694

Title : Preventing the spread of misinformation on online social media using machine learning.

Author:PAI ADARSH ANIL, KAMATH AJINKYA SURESH, PEGADO JESON PASCOL

Project Guide: Ms.Shobha Tyagi

Abstracts :OSMs (Online Social Media) are one of the most popular platforms for people to obtain or spread information throughout the world in just a few minutes. Among the OSMs, particularly the popular micro-blogging websites like Twitter facilitate the creation and sharing of information, ideas, career interests and other forms of expression via virtual communities and networks. However there is no guarantee about the credibility of the posts i.e. how legitimate is the information due to the use of crowd sourcing & absence of any moderation. This makes it easier for malicious users and some anti-social elements to circulate rumors and create panic among the public, particularly during an incident or a disaster by generating fake content, fake images & fake news. Further, some of these users may even circulate malicious contents to employ spamming or phishing, taking advantage of the situation. We followed the concepts of Data Mining, Ensemble Learning and Natural Language Processing Algorithms to confiscate this heinous concern in real time and thus contributes to the development of a better and rumour free society by curbing the spreading of wrong information. The prediction of wrong information through our proposed model turns out as highly accurate when executed and compared with various other machine learning algorithms like Naïve Bayes, Decision Tree, Random Forest and Ensemble Learning. Ensemble Learning algorithms gave the best (around 90% efficiency) and convincing results as compared to other tested algorithms and would strike the chord in preventing the spread of misinformation more rapidly and thus could serve as panacea to spread rumours and ill statements in the society.

Acc.No:PR1695

Title : Diet Tracking using Calorie Estimation From Food Images

Author:MULLA MASIRA NIZAMUDDIN, MEHRA VISHESH RAJESH, YADAV AKSHAY RAKESH, NAIK APURVA GANESH

Project Guide: Ms.Vincy Joseph

Abstracts :Chronic diseases such as diabetes, obesity, and cardiovascular diseases are becoming the dominant sources of mortality and morbidity worldwide. Unhealthy diet is one of the key common modifiable risk factors in preventing and managing chronic diseases. Hence, monitoring dietary intake is an important task for health management and to prevent obesity, diabetes, and cardiovascular diseases. Providing users with convenient and intelligent solutions that help them measure their food intake and collect dietary information are the most valuable insights toward long-term prevention and successful treatment programs. The project aims at creating an application which can estimate the calories in a given food item from its image. The first approach, web application, uses Inception v2, a deep neural network, for recognizing the image. It is fine-tuned on a custom dataset which consists of 12 classes of fruits. The deep neural network places a bounding box on the identified food item. Furthermore, this bounding box is used to calculate the volume of the food item. This calculated volume is then mapped to its respective calorie content. The advantage of this approach is that it does not require users to manually enter the volume or the portion size. This system yields an accuracy of 95% in correctly predicting the calories. Furthermore, it is platform independent and does not require internet connection for fetching the calorie content. The second approach uses an android application to estimate the calorie content of the food item. It allows users to click the image of the food item as well as search the calorie content of a food item from an existing database. The application sends the food image to Clarifai's 'Food Image Recognition Model' which returns the item tags, that is the name of food item which are most likely to be present in the food. The user is asked to select the correct tag from a list of items. This tag is then used to query Nutritionix API's database which returns the nutritional breakdown, i.e. the protein, carbohydrate, fat and calorie content of the food item. The user is then asked to select the portion size of the food. This entry is added to a a daily log. This log can be maintained or deleted. An advantage of this system is its scope since Clarifai's API allows visual recognition of over 1000 food categories. However, it requires users to manually enter the portion size.

Acc.No:PR1696

Title : Training An AI Agent In A Simulated Warehouse Environment Using Reinforcement Learning

Author:KOTIAN SHAILEE MADHUKAR, MATHKAR MADHURA PRASHANT, KULKARNI YASH UDAY

Project Guide: Mr.Jerin Thankappan

Abstracts :Warehousing is an integral part of supply chain management process. Most challenges faced by warehouse management includes effective resource allocation, inventory replenishment, inventory picking, routing, minimizing time, minimizing cost, etc. In this project, we have used Reinforcement Learning (RL) approach to address effective object

allocation for warehouse management. We have used RL techniques to minimize the time in transit for stocking and retrieving products in the warehouse, ultimately improving the warehouse operations. The AI Agent is trained in a simulated environment, ViZDoom. The AI agent will be able to navigate through the environment with only the frames on the screen and controls of the environment. The collection of the objects in minimum time is considered as the goal for the agent. In order to train the agent, we have used two RL techniques, namely Deep Q-Learning (DQN) and Asynchronous Advantage Actor-Critic (A3C) algorithms and have presented a comparison between the above mentioned techniques.

Acc.No:PR1697

Title : Smart Door System with Facial Recognition using DLM

Author:PADOLE DHANANJAY, MOHD TAUSEEF ASGHER, SAWANT SARVESH SANTOSH

Project Guide: Ms.Varsha Nagpurkar

Abstracts :In today's world,face recognition is an important part for the purpose of security and surveillance.Hence there is a need for an efficient and cost effective system.Our goal is to explore the feasibility of implementing Raspberry Pi based face recognition system using advanced face detection and recognition techniques such as Haar cascade and Kernel PCA.We aim at taking face recognition to a level in which the system can replace the use of passwords and RFID-Cards for access to high security systems and buildings.With the use of the Raspberry Pi kit,we aim at making the system cost effective and easy to use,with high performance. A new fast learning algorithm named deterministic learning machine(DLM)for the training of single-hidden layer feed-forward neural network(SLFN)subject to face recognition problem v is proposed to solve the problem of high dimensional pattern recognition.The existing training algorithms for SLFN are either gradient based iterative learning algorithms or non-iterative algorithms such as extreme learning machine(ELM).The iterative learning algorithms suffer from slow learning,under-fitting,over-fitting whereas in ELM input weights are randomly chosen consequently the classification using ELM is non-deterministic.The proposed DLM is a non-iterative algorithm in which input weights are derived from input space without finding any parameter experimentally and output weights are calculated as an exact solution of linear system. This makes very fast learning and deterministic classification.The feature extraction is performed in a multi-model way by integrating the face image pixels intensity and local entropy of the image.The resulting face recognition system is highly robust against ample facial variations including illumination,pose,expression and occlusion.The proposed DLM with multi-model feature extraction is evaluated on AT&T and Yale face databases.The experimental results clearly reveal the superiority of the proposed approach.

Acc.No:PR1698

Title : Stock prediction Using deep learning and fundamental and technical analysis

Author:DESAI NIKHIL DIPAK, BHUWAD CHAITANYA VISHRAM , BELEKAR AVIRAT VIRENDRA

Project Guide: Ms.G.Anuradha

Abstracts :The stock market prediction is full of uncertainty and is affected due to many factors such as momentum, mean revision, martingales (A mathematical series in which the best prediction for the next number is the current number) etc. Hence prediction of stock market has become one the important exertions in finance and business. Fundamental and Technical analysis is evaluated for predictiong the stock values. Fundamental analysis and technical analysis is done by Long Short-Term Memory (LSTM). LSTM will be used because of its ability to process of long sequences of data. Since the combination of both i.e. fundamental and technical analysis is applied, we could yield a better accuracy in predicting stocks

Acc.No:PR1699

Title : Character Recognition of MODI Script

Author:SAWANT SHRUTI RAMESH, SHARMA ANKITA RAJ, SUVARNA GEETA GOPAL, TANNA TALISHA DEEPAK

Project Guide: Ms.Snehal Kulkarni

Abstracts :Traditional Devanagari was found to be excessively time-consuming since each character required as many as 3 to 5 strokes and lifting of the hand, each time the stroke was completed. Modi script overcomes this obstacle by “bending” the letters thereby doing away with the need of lifting the hand. Modi script was invented as cursive “shorthand” to note down the royal commandments. Many historical documents and letters are written in Modi script. Study of Shivakalin and Peshvekalin era documents is almost impossible without the knowledge of Modi script. This work aims to bridge the gap between Devanagari and Modi Script by developing a system to map the recognized Modi characters to its Devanagari equivalent. Our dataset would consist of 46 different classes of Modi Script characters. The various approaches for feature extraction usually used include moment invariant, affine moment invariant, chain code histogram, intersection junction and for character classification include SVM and KNN classifiers. Deep Neural Networks on the other hand do not require any feature to be explicitly defined, instead they work on the raw pixel data to generate the best features and use them to classify the inputs into different classes. Hence, we propose a deep learning architecture for character recognition. CNN uses little pre-processing compared to other image classification algorithms. This means that the network learns the filters which in traditional algorithms were hand-engineered. The system aims to provide a good recognition rate by implementing CNN.

Acc.No:PR1700

Title : Phishing and pharming detetction using machine learning

Author:MEHTA PALASH JATIN, JANGID MUKUL DINESH, GAJERA KISHAN KAMLESH

Project Guide: Ms.Jayashri Mittal

Abstracts :Phishing is the most common yet a major cyber crime. In this fraudulent practice, the perpetrator sends an e-mail to the target posing as a legitimate organization. This email contains a URL link to the phishing website which the user is prompted to visit and is induced to reveal private information, such as passwords, card numbers, etc. The plot of this attack is that the phishing website appears exactly the same as that of the legitimate one to avoid any kind of suspicion. However, the URL features of both websites are different. These differences can be a strong basis for classifying a phishing website accurately and effectively. In our research, we identified fifteen such important URL features for phishing detection. All these features were extracted from our dataset consisting of phishing as well as legitimate website URLs. The resulting preprocessed dataset was then trained using Artificial Neural Networks(ANN), Support Vector Machine and Logistic Regression. Artificial Neural networks fetched the highest classification accuracy so it was implemented it in our model. Pharming is a special type of phishing attack or DNS poisoning in which the user is redirected to a fake website by changing the IP address at the DNS server. For pharming, dual step analysis is performed (IP address check and web page content comparison). First, local DNS and the reference DNS are queried to check if they return the same IP. If not the case, image visualization is implemented to compare the webpage between the two. If they are not the same, we conclude that pharming is present. We have developed a Google Chrome plugin that simultaneously checks for phishing and pharming attacks respectively using the stated models. Even if any one the two attacks are detected by the system, the user is warned for the same. Thus, we strive to provide overall protection to the user from such cyber-attacks.

Title : Sports analysis and Outcome prediction system

Author:SALIAN DARSHAN RAGHUNATH, SAWANT SAHEEL RAVINDRA, MAURYA SANTOSH VINOD

Project Guide: Ms.Jayashri Mittal

Abstracts :Phishing is the most common yet a major cyber crime. In this fraudulent practice, the perpetrator sends an e-mail to the target posing as a legitimate organization. This email contains a URL link to the phishing website which the user is prompted to visit and is induced to reveal private information, such as passwords, card numbers, etc. The plot of this attack is that the phishing website appears exactly the same as that of the legitimate one to avoid any kind of suspicion. However, the URL features of both websites are different. These differences can be a strong basis for classifying a phishing website accurately and effectively. In our research, we identified fifteen such important URL features for phishing detection. All these features were extracted from our dataset consisting of phishing as well as legitimate website URLs. The resulting preprocessed dataset was then trained using Artificial Neural Networks(ANN), Support Vector Machine and Logistic Regression. Artificial Neural

networks fetched the highest classification accuracy so it was implemented it in our model. Pharming is a special type of phishing attack or DNS poisoning in which the user is redirected to a fake website by changing the IP address at the DNS server. For pharming, dual step analysis is performed (IP address check and web page content comparison). First, local DNS and the reference DNS are queried to check if they return the same IP. If not the case, image visualization is implemented to compare the webpage between the two. If they are not the same, we conclude that pharming is present. We have developed a Google Chrome plugin that simultaneously checks for phishing and pharming attacks respectively using the stated models. Even if any one the two attacks are detected by the system, the user is warned for the same. Thus, we strive to provide overall protection to the user from such cyber-attacks.

Acc.No:PR1702

Title : AirNote - Pen it down

Author:SANKHE TANMAY YATIN, VISHWAKARMA VIKAS KAMLESH, SINGH AVINASH MANOJ, PURANIK PRANAV PRAFULLA

Project Guide: Ms.Pradnya Rane

Abstracts :Writing is a mode of coherent communication which can effectively convey our thought. Today, typing and writing are the usual modes of recording information. Another technique that is rapidly gaining popularity is air-writing. It refers to writing characters or words in free space using an air-pen or a finger. It differs from conventional writing methods as there is no pen-up and pen-down motion. With the evolution of smart wearables, the digital world can now be controlled with human gestures. These wearables are capable of perceiving and comprehending our actions. Our project capitalises on this need gap, by focusing on creating a motion-to-text converter that would potentially act as a software for the smart wearables for air-writing. This project is a point gesture detector-cum-identifier. We will use computer vision to trace the trajectory of finger and machine learning to recognize the word (out of the image that is formed through the action of motions). This will make air-writing possible. The generated text can be further be used for various purposes such as sending messages, mail, etc. It will prove to be a powerful communication tool for those with hearing difficulties. It will be an efficient way to communicate and will reduce the usage of mobile phones as well as notebooks, thereby making the actions of writing and texting redundant.

Acc.No:PR1703

Title : Object Identification for Robot Vision

Author:SHINDE SAILEE SANJAY, PAWASKAR ADITI MAHESH, BHAT AKSHATA RAM

Project Guide: Dr.Kavita Sonawane

Abstracts :As robots become increasingly sophisticated, the need for developing fast and efficient methods for robot vision and object detection becomes a necessity. Current research

in the field of robot vision depicts use of various algorithms such as deep belief nets, convolutional neural networks, deep autoencoders and K-means based feature learning effective for individual objects. In our project we use Single Shot Multibox Detector(SSD) algorithm using Convolutional Neural Network (CNN) for image classification. Bins Algorithm is used for feature extraction. By using these two algorithms we are showing comparison between the algorithms based on the accuracy of the output. This methodology can be applied for detection of objects in the home environment. The scope of this project is limited to home environment. It is particularly useful for the service robot industry. Lastly all the implementation with be integrated with Robot Operating System. This makes addition of newer modules easier and integration of robot vision with its hardware smoother.

Acc.No:PR1704

Title : Visual representation of natural language text

Author:JAIN DHRUVI MAHENDRA, JAYBHAY SHEETAL SHANTILAL,BHAGAT SIDDHI PREMCHAND,

Project Guide: Ms.Priya Chaudhari

Abstracts :Most of the people have problem in understanding many concepts in their day to day life. For example, students face problems in understanding concepts of their studies. This is because they don't have creative mind and cannot imagine. It is said that, "A picture is worth a thousand words". So the aim of this system is to automatically generate image from given natural language text.

"Visual Representation of Natural Language Text" is a system that incorporates natural language text input to construct image in real-time. Such type of system forges the way for people to interact and construct graphical media which is as natural as communicating via text. System aims at taking the basic arithmetic word problems of primary section (grade 1 and 2) as input and depicting its solution as an image on the output screen. Natural Language Processing (NLP) is used to process the word problem given by user and to find the objects to create the solution. This process of understanding input text includes tokenizing, part of speech tagging, parsing, dependency extraction, lemmatization and chunking. The dataset that is used in this process will grow as new objects are encountered in word problem. The objective of this module is to help the primary school students in solving arithmetic word problem by representing its solution pictorially.

The system will also have a module which will generate photo-realistic images of bird based on input text that will help students to reflect their imagination on the screen. This will be implemented using Generative Adversarial Networks (GAN). The system will be helpful to the teachers and parents as well to teach word problems to their students/children. Also the textbook publishers will be benefitted through our system as it will reduce their task of creating solution of word problem to be printed in textbooks. Our system provides the user to download the solution for their use and reference.

Acc.No:PR1705

Title : Identifying Depressive Symptoms in Social Media

Author:MHALSEKAR TUSHAR RAJENDRA, NAIR ROHIT RADHAKRISHNAN, NAIR SHRUTI RAJAGOPALAN

Project Guide: Ms.K.Priya Karunakaran

Abstracts :Depression, a latest epidemic of modern era has always drawn the attention of researchers to find & evaluate the level, causes and prevention. The worst case of high depression level may even cause a person to contemplate suicide. Each year, countless number of people suffer from depression and very few receive adequate treatment. With the rise of social media, millions of people are routinely expressing their moods, feelings, and daily struggles with mental health issues on social media platforms like Twitter.

Our aim is to monitor a user's tweets and identify the red flags which might help us to unravel depression symptoms. We can then extend a helping hand by referring them to crisis resources like AASRA. Based on the analysis of tweets crawled from the user's Twitter profiles, we demonstrate the potential for detecting clinical depression symptoms which emulate the PHQ-9 questionnaire clinicians use today. Depression in social media can be detected by using a multimodal dictionary, super vector classifier method and semi-supervised approach involving bottom-up and hybrid processing

Acc.No:PR1706

Title : Automatic Robbery/Theft Detection Using CCTV Surveillance in Banks

Author:PILLAI MEGHNA RADHAKRISHNAN, LEMOS REUEL RICHARD, KAKADIYA RUTVIK BHAGWAN, MANGALAN SEBIN ANSON

Project Guide: Ms.Sneha Jadhav

Abstracts :Deep learning is the segment of artificial intelligence that is involved with imitating the learning approach that human beings use to gain certain types of knowledge. Analyzing videos a part of deep learning is one of the most fundamental problems of computer vision and multimedia content analysis for decades. The task is very challenging as the video is an information-intensive media with large variations and complexities. Human supervision is still required in all surveillance systems. Recent advances in computer vision which are seen as an important trend in video surveillance lead to dramatic efficiency gains. We propose a camera footage based theft detection based on motion along with thieves tracking. We use image processing to detect theft occurrence and motion of thieves in CCTV footage, without use of sensors. This system focuses on object detection. The security personnel can be notified about the suspicious individual committing burglary using Real-time analysis of human motion from CCTV video and thus gives a chance to avert the same.

Acc.No:PR1707

Title : Text Summarization And Querying Model

Author:PEDNEKAR ADITI SHIVAJI, MAVANI UMANG BHARAT, SHINDE DEVASHRI SUNIL

Project Guide: Ms.Safa Hamdare

Abstracts :Learning skills play a very important role to build student's foundation for a language. It not only becomes difficult for students to analyze the important information available in an extensively lengthy passage. Our proposed system focuses on helping students in developing their skills by understanding passages in their textbooks through text summarization and question-answer module. The main idea is to save a potential amount of time and effort of readers in finding valuable information in a given document. Also, the question and answer extraction help one to understand a passage in much depth. So we developed a model which simplifies the task of understanding the passages primarily focusing on History Textbooks passages of Secondary School Certificate (SSC) Board Maharashtra State that consists of facts and figures by combining the Text Summarization Module with Question Answer Module that provides benefits to both students and teachers.

Acc.No:PR1708

Title : Personalized learning material for students with special needs using ML

Author:SONI MAYUR ASHOK, TIWARI VIJITASHW VINAY, DCRUZ FRANCIS JOHN

Project Guide: Ms.Dakshata Panchal

Abstracts :The idea behind personalized learning is to tailor the education to meet the different needs of each student. "It lets students choose where, what, how, and when they learn, thus providing flexibility to ensure mastery of the educational content".

"Personalized learning is not a product you can buy" but rather a strategy that good teachers can implement. The main aim of personalized learning is to help students with disabilities.

Students with disabilities often need subject matter presented through different methods or via modifications therefore, it is imperative that these technological advances benefit all students and learning styles. Machine Learning Opens Up New Ways to Help Students with Disabilities. Children with neurological disorder such as autism need personalized development system for their daily activities. Technology can play a significant role.

There are four parts of the system: i) identify level of the user by using machine learning algorithm. ii) web mining to generate multimodal learning materials from text story or learning keywords, iii) linking user preferences with the result, iv) personalizing contents for users delineated with an intelligent interface. This paper explains personalization of results using machine learning algorithm.

Acc.No:PR1709

Title : Prediction of a Cricket Squad using Machine Learning

Author:SEQUEIRA NELSON DOMNIC, RODRIGUES STEPHEN ANAS, RODRIGUES NIGEL IGNATIUS

Project Guide: Mrs.Varsha Shrivastava

Abstracts :Analyzing the performance of a player is very crucial to have a well-balanced squad. The selection of a team plays a vital role in deciding whether a team would win or lose a match. Different tours demand various combinations of the players as the conditions differ from stadium to stadium. Thus, the selectors have to consider attributes like runs and strike-rate of a batsman, bowling economy, performance of a player in a particular condition, performance against a particular opposition and many more. Using the concept of machine learning, the selection process can be optimized. Regression models can be trained to predict continuous values of cricket parameters for individual batsmen and bowlers. The proposed model uses Random Forest Regression to predict the value of the attributes of the batsmen and the bowlers in the given match, which will help in selecting the players for the given tour. The model will be used for the ODI format of the game. The past record of the player against a particular opposition is used as the dataset to train the model. The touring team, the opposition and the venue of the match are taken as input by the model. A rank-wise list of all the batsmen and bowlers is generated based on the input fields which can be used by the selectors and the captain to select the team as per the desired combination.

Acc.No:PR1710

Title : Driver Distraction Detection

Author:SINGH SATYAM RAJNARAYAN, SALIAN ROSHAN RAMESH, WALAVALKAR ABHISHEK

Project Guide: Ms.Varsha Shrivastava

Abstracts :Distracted driving is a major cause of road mishaps. Vehicle driving activity needs full attention of driver and activities which require the driver to take his eyes off the road for extended period can lead to fatal accidents. The driver must be focused on the road ahead all the time. Apart from distraction another reason for increasing road accidents is fatigue, where driver unknowingly loses focus on the driving activity, primarily due to sleep deprivation. Driving in an inattentive state reduces driver’s ability to react to situations and reduces control over vehicle. Road mishaps can be avoided if driver is provided timely alert when distracted state is detected. Our aim is to implement a solution to minimize distraction by alerting driver when signs of distraction are detected. Implemented methodology uses a camera mounted in car near the steering wheel on the dashboard. Both distraction and fatigue in driver is detected based on eye pupil movement. Our solution detects distraction using two parallelly computed functions, one function computes distraction based on eye pupil and other function calculates drowsiness. If either of the two parameters detect distraction sound alert is generated.

Acc.No:PR1711

Title : Food Traceability System using Block chain and QR code

Author:KUDU SUMUKH PRADEEP, MISHRA NILESH MARKANDAY, CHOUDHARY SANTOSH RAM, MISTRY SAGAR BHARAT

Project Guide: Mr.Rupesh Mishra

Abstracts :Recently, many food scandals broke out one after another in India and people are appalled. After these intimidated incidents, people are now more concerned about food safety. These issues not only harm consumer's health but also it debilitates their trust in food markets. Since the current food logistics pattern is not meeting the need and demand for the food market, building a secure and reliable food traceability system has become a necessity.Tracing food supply chain is the process of tracking the movement of a particular food item in the entire process. The proposed system will provide traceability, transparency, efficiency, reliability, and security through all the stages of a food supply chain. The proposed system will trace the food product from all its stages. Distributed ledgers and decentralized systems play a key role in building this application as its key features are immutability, transparency, consensus, disintermediation and distributed ledgers, and smart contracts.

Acc.NoPR1712

Title : Plant disease detection using Image Processing

Author:BHATT SHRUTI ASHWIN, LADSARIA KHUSHBOO KRISHNAGOPAL, BHANDARI MIRAAJ JAYESH, DHOLAKIA MILIND MUKESH

Project Guide: Ms.Snehal Kulkarni

Abstracts :Traditional Devanagari was found to be excessively time-consuming since each character required as many as 3 to 5 strokes and lifting of the hand, each time the stroke was completed. Modi script overcomes this obstacle by "bending" the letters thereby doing away with the need of lifting the hand. Modi script was invented as cursive "shorthand" to note down the royal commandments. Many historical documents and letters are written in Modi script. Study of Shivakalin and Peshvekalin era documents is almost impossible without the knowledge of Modi script. This work aims to bridge the gap between Devanagari and Modi Script by developing a system to map the recognized Modi characters to its Devanagari equivalent. Our dataset would consist of 46 different classes of Modi Script characters. The various approaches for feature extraction usually used include moment invariant, affine moment invariant, chain code histogram, intersection junction and for character classification include SVM and KNN classifiers. Deep Neural Networks on the other hand do not require any feature to be explicitly defined, instead they work on the raw pixel data to generate the best features and use them to classify the inputs into different classes. Hence, we propose a deep learning architecture for character recognition. CNN uses little pre-processing compared to other image classification algorithms. This means that the network learns the filters which in traditional algorithms were hand-engineered. The system aims to provide a good recognition rate by implementing CNN.

Acc.No:PR1713

Title : Obesity Related Disease Prediction from Healthcare Communities using Machine Learning

Author:PEREIRA NAOMI LISTON, DSOUZA JESSICA ANTHONY, RANA PARTH PRAKASHBHAI

Project Guide: Ms.SUPRIYA SOLASKAR

Abstracts :Along with the growth of big data in biomedical and healthcare communities, the accurate analysis of medical data benefits early disease detection, patient care and community services. However, the analyses accuracy is reduced when the quality of medical data is incomplete. Moreover, different regions exhibit unique characteristics of certain regional diseases, which may weaken the prediction of disease outbreaks. This work aims to overcome the above-mentioned limitations by developing a state-of-the-art system that aims at streamlining machine learning algorithms for effective prediction of chronic disease outbreak in disease-frequent communities such as Obesity and its related diseases. There are many factors that contribute to the occurrence of Obesity. The government indulgent regulation on food restriction provides easy accessibility to unhealthy, processed food. Also, India's growing career-oriented lifestyle gives rise to irregular biological patterns especially in younger generation who prefer indoor games rather than playing outside. The behavioral and socio-psychological factors also contribute for obesity in a person. Other factors that are influential are sleep, stress, Ethnicity, among many other such factors which gives rise to obesity in today's era. The common diseases due to obesity are Osteoarthritis, Cancer, Hypertension, Infertility, Heart Diseases, Back pain, Diabetes, Strokes, Varicose Veins. In addition to poor mental health, respiratory diseases, hormonal disorders and food allergies. There felt a need to develop a system that considers parameters affecting an individual physically, internally, mentally, psychologically and emotionally that eventually leads to obesity and also suggests healthier alternatives to curb this problem. The developed system will undeniably be beneficial for predicting obesity, its related diseases and for the future betterment of an individual.

Acc.No:PR1714

Title : A Chess Companion

Author:ROSAL COLACO, RUANA JADHAV, ELVITA FERNANDES

Project Guide: Ms.Pradnya Rane

Abstracts :If you are looking for a way to test your mind, well, we have just the game for you - 'Chess'. But here is the twist, the pieces move on their own. By voice commands, you give commands to the system and the piece moves.

We present to you A Chess Companion, the complete chess game irrespective of age and gender and to top it all even people with physical disability can play. We bring to you an ancient game, but with magical powers.

There have been many systems that have been invented over the years for Chess. But, they had their own shortcomings. The existing systems do not provide an entire hands free playing atmosphere. This causes a problem for those players who are old by age but young at heart. Also, people with physical limitations like the visually impaired, motor disabled, etc. cannot play this game without proper training and help. This made us realise the importance of a system which not only provides various features to those people with physical disability but also to everyone who are interested in the game of chess.

A Chess Companion is the game of the future, where one can learn and play chess. This bright innovation gives you an experience of Wizard's Chess, exactly like the one from Harry Potter. With various features of Voice Commands, Speech Biometrics and Automated movement, there could be no better way to play this game. This board gives you the experience of playing the game like a Wizard, wherein the pieces move automatically. You can choose your opponent - A player face to face, a person who you can connect to over the server or the board itself! It is platform to help motivate all the people in the world who know the intriguing game of chess and also generate an interest to learn it. We provide a platform as an equal because we strongly believe in equality in sport.

INFT

ABSTRACTS

Title : Prediction of Epidemic Disease using recurrent Neural Network

Author:MEGHA DILIP CHOVATIYA , ANUSHKA KALUBHAI DHAMELIYA, JAYITA NITIN DEOKAR, JESSICA JOHNSON GONSALVES

Project Guide: Ms.Amritha Mathur

Abstracts :India and various developing nations where the population is high, healthcare is one of the major challenges to deal with. The medical resources that are made available by the government cannot cope up with the high population. The rural areas are affected the most due to lack of a proper medical infrastructure by public health sector. A large chunk of population cannot afford private hospitals as they belong to lower middle class or below poverty line group. Therefore, the load on public health sector has increased manifold. In case of an epidemic, the death rate is high as most of the population have no access to medical resources and thus timely treatment. As a large chunk of population of our country lives in rural areas, it becomes a dire need to arrange for a proper medical infrastructure in case an epidemic occurs. Dengue being one of the most occurring epidemics in our country as well as the reason for a high fatality rate, needs to be predicted well in future so that medical resources can be arranged on time and thus reduce the fatality rate. Although dengue does not require a specific line of treatment or prolonged, it is essential to be detected and treated on time. Our system aims at predicting epidemic (dengue), so that the health sector can arrange for necessary resources before time. The system will make use of Recurrent Neural Network for prediction. Data used for prediction will include the climatic conditions, pollution and the statistics of patients diagnosed with dengue in the previous years. The data has been taken from various government websites. The model will learn using this data and predict the possibility of an outbreak if similar climatic conditions occur in future. The result of the possibility of an outbreak will be shown by graph in website.

Acc.No:PR1757

Title : Smart Phishing Detection

Author:GAURI KOSSAMBE, JIGNASA JOSHI, ADITYA KOTHARI, ANIKET KUMAR

Project Guide: Dr. Minal Lopes

Abstracts :Phishing is a new type of network attack where the attacker creates a replica of an existing web page to fool users in to submitting personal, financial, or password data to what they think is their service provider’s website. The phishing problem is broad and no single silver-bullet solution exists to mitigate all the vulnerabilities effectively, thus multiple

techniques are often implemented to mitigate specific attacks. Email has become one of the most important forms of communication.One

of the major threats faced by web users is spam. Spam email links lead users to phished website which can disrupt users data. These sites can also gather sensitive information from. Thus, to avoid this from happening, an anti-phishing system is to be developed using Image processing with Keras using CNN and feature extraction and classification using logistic regression based approach to display a popup message telling the user whether the webpage is a phished one or not.

Acc.No:PR1758

Title : Generation of 3D Retinal Model using OCT images

Author:TABASSUM MOSES CHOHAN, CAMILLA ROBIN DABRE, DIWAS JEROME JUDITH ANTONY, PRASAD DATTARAM CHAVAN

Project Guide: Ms. Mrinmoyee Mukherjee

Abstracts :Human Eye is the most complex sensory organ comprising of a multitude of substructures. Retina, a mere set of tissues and one third of a millimeter in width, consists 10 layers. The deformities in these retinal layers account for many dis-eases related to vision such as retinopathy, age related macular degeneration, eye caner, retinal detachment and inherited retinal degenerations. Two major type of imaging techniques which are being used for analysis of retina are digital fundus images and Optical Coherence Tomography (OCT). OCT scan is a mean of ex-tracting the information about the inner retinal layers non-invasively. OCT scans provided a video with multiple frames, each of which corresponds to a slice of eye (retina). The purpose of this project is to make a 3D model of retinal layers captured through OCT scans to provide a better visualization of retina to ophthal-mologists. There are two main parts of project which include image processing module and graphics. The frames gathered from OCT scans are processed using image processing techniques to extract the details of the layers in the form of co-ordinates. Once the coordinates of all the points are extracted a point cloud is formed. Using this point cloud, a three dimensional model using these points is regenerated.

Acc.No:PR1759

Title : Kickstarter Success Predictor

Author:YASH KANTHARIA, ISHAN KHEDKAR, SIDDHARTH JHAVERI, JOSHI SHUBHAM

Project Guide: Ms.Shree Jaswal

Abstracts :The internet has become a popular medium for crowdfunding campaigns, aimed at raising money from large numbers of contributors. Kickstarter is one of the most popular a crowdfunding platforms on the internet. The main purpose of the project is to generate the closest and accurate probability for an ongoing Kickstarter crowd-funding campaign before it

starts its funding. Our proposed system efficiently identifies success of a particular campaign. For this major features of a campaign would be considered such as duration, category ,country, state, city, name length, blurb length, currency and goal in USD. User can interact with the system through a very simple GUI. We implemented different algorithms such as Random Forest, XGBoost, AdaBoost and CatBoost. We inculcated the CatBoost classifier into our application as it has the best accuracy of 83.33% and computes at a much faster rate compared to other classifiers.

Acc.No:PR1760

Title : Solar Energy Prediction using weather forecast

Author:RACHEL DSOUZA,PRATIK DHORDA, DEEP HARIA, OMKAR JADHAV

Project Guide: Dr. Joanne Gomes

Abstracts :The world is evolving and we need to make sure that there is enough energy to be provided to the people. Solar power is one of the most promising renewable en- ergy sources, the generation of which does not result in the emission of pollutants and greenhouse gases. But the availability of solar energy is not guaranteed at any particular place or time: it depends, of course, on time-of-day, but also on the weather conditions at that specified time. Solar power is one of the most widely used renewable energy sources, it is highly variable and needs accurate forecast- ing for its large-scale uses. An accurate prediction of solar energy can help solar power companies complement their production shortfalls in a timely manner, thus saving high cost of purchasing power from the market at the last moment. In this project, solar energy generated based on the weather conditions is predicted. A comparative study of different algorithms such as Linear Regression (LR), Multi- layer Perceptron (MP), M5P Tree and Support Vector Machine (SVM) algorithm with respect to different weather parameters and how the parameters affect the solar energy is performed.

Acc.No:PR1761

Title : Stay Awake using brain wave technology

Author:JOYCE CHETTIAR, NEHA BORULKAR, CHINTAN DAVDA, PRAVIN PANDEY

Project Guide: Dr Joanne Gomes

Abstracts :Drowsiness is one of the major cause of incomplete work. Humans have a

lot of work to complete and this takes up a lot of time and energy. To complete their work they put in extra time by neglecting their sleep and staying up late to complete the task. By doing so, they are fail to maintain a healthy sleeping pat- tern. As suggested by studies, an adult requires 7-9 hours of sleep every night, failing to do so may risk their health. The drowsy state can be detected using the brainwaves of the individual. The drowsy state has a frequency of 4-7 Hz, it also known as theta frequency. These signal measurements are known as Electroen- cephalography (EEG). Thus the EEG signals are also termed as brain waves.

The existing BCI systems detect driver drowsiness, epilepsy and seizures, in most of the cases either the system is complex to use or can only be done with medical professionals in lab reducing the ease of use of BCI. In the few existing brainwave detection systems classifiers and predictors such as Fuzzy, Bayesian and Artificial Neural Networks are used whose accuracy rate is less than SVM, which is used in this system. High accuracy rate is needed for classification of brainwaves, since brainwaves are very sensitive as well as rapidly changing signals. In this project, a drowsiness detection system based on a brain-computer interface (BCI) headset having 3 electrodes is proposed. The purpose is to have an extremely user-friendly system which can even be used by a naive user. Using SVM, it can be checked whether a person is suffering through sleepless or not, even-though this project aims the user to alert while working, here it also checks whether a person has symptoms of sleep loss or not, and if there are signs of sleep loss, it notifies the user to visit a doctor.

Acc.No:PR1762

Title : Automatic Electoral Identity generator with OTP

Author:SHAH NIRALI VIKRAM, NAIR SHIRISH SABAREESAN, OZA BHAVIN DHIRAJLAL, RUSSEL D'BRITTO

Project Guide: Ms.Purnima Kubde

Abstracts :Automatic Electoral Identity Generator with OTP Authentication is a web application proposed to help people poses an Electoral Identity card, keeping in mind all the current problems that are present in the current system. It uses 2 existing databases,i.e Birth Certificate DB and Aadhar DB to create a third database containing details of the generated Electoral ID.

When the applicant visits the portal,he/she has to enter the Aadhar number and a reference number which will be sent to his/her Mobile Number/Email ID.

The database will check its records for the mentioned Aadhar number and check if the applicant has completed 18 years of age.If yes,it will verify the records from the Birth Certificate Database and generate the Electoral ID card.

This web application aims to curb the task done by two individual government departments (health and election commission) and generate Electoral identity cards quickly and efficiently.

Acc.No:PR1763

Title : Online exam portal

Author:YOGESH KUNDANSINGH ALMIYA, LOVELESH JOSEPH COLACO, AMANSINGH KISHAN CHAUHAN, SHERVIN D'SILVA

Project Guide: Ms PRIYANCA GONSALVES

Abstracts :Mostly available answer correction system is manual paper checking. Teachers sometimes miss important points while evaluating, or may not understand hand-writing. In case of wrong marks allocation students need to go through revalua-tion. Existing system requires lot of time. We proposed to develop such system that will allow moderator to set paper with predefined answers. Our proposed sys-tem will also evaluate textual answers. Teacher can do analysis of result either student wise or subject wise. It would also provide blog to discuss doubt between student and teacher. It would work for examination across schools, colleges or any institution.

Acc.No:PR1764

Title : Sentimental Analysis on election and M-voting

Author:RYAN FERRAO, VAIBHAV DOSHI, KENNETH DMELLO, MAXWELL GOMES

Project Guide: Mr.Vaibhav Kala

Abstracts :Sentiment Analysis is very crucial for elections as this helps the lay person to know about the personality, intentions and popularity of the politicians. Sentiment Analysis for Elections can be done methodically using traditional feedback methods that involve citizens feedback. With the rising demand and advancements of Big Data technologies in the past decade, it has become easier to collect tweets and apply data analysis techniques on them.Additional research has focused on the strength of an opinion expression in which each clause in a sentence can have a neutral, low, medium, or high strength.Our approach, lets us analyze the strength of sentiment that sentences convey on a continuous scale from 1 ("maximally negative") to +1 ("maximally positive"). The differences might seem small, but the implications are important. Here we present a unified approach to opinion analysis.Sentiment analysis and opinion mining is the field of study that analyzes people's opinions, sentiments, evaluations, attitudes, and emotions from written language.It is one of the most active research areas in natural language processing and is also widely studied in data mining, Web mining, and text mining. In fact, this research has spread outside of computer science to the management sciences and social sciences due to its importance to business and society as a whole.

Acc.No:PR1765

Title : Stock Market prediction using machine learning

Author:KRISHA KOTHARI,ADVAIT JOSHI, BHAVI MANIAR, BHUMI MEHTA

Project Guide: Ms.Vandana Patil

Abstracts :

Predicting the Stock Market has been the bane and goal of investors since its existence. Predicting the stock has been the highest grossing topic in financial market, yet there are not more than 100 research papers about it. As we all know that stock market is volatile in nature and majorly based on Brownian motion. If we are able to get some features and predict the

stock prices it won't be always accurate. However, we proposed a model that can help predict the stock trends (upward or downward) with some accuracy. Stocks are time series data and there are very few algorithms that can handle time series data.

Neural networks works best with the time series data. Long-short Term Memory(LSTM) is a recurrent neural network which is best known for working with time series data. With the available computational power and data which can be acquired from Kaggle we proposed a LSTM model that performs prediction for upcoming stock trends. LSTM can learn patterns in stock prices which help in predicting stock trends. In this project, LSTM based Recurrent Neural Network(RNN) model will be used for predicting the stocks value for five days and generating a graph for the trends.

Acc.No:PR1766

Title : Security in Banking system using QR code and Graphical password

Author:ABEL JOHNSON, ALLAN D'SOUZA, AJIT JOSEPH RAJENDRAN, GODWIN EMMANUEL

Project Guide: Ms. Purnima Kubde

Abstracts :The project developed contributes in the design and implementation of an inventive secure authentication method which utilizes login Id password, QR code and Graphical password. QR code is extremely secure as all the sensitive information stored and transmitted is encrypted and it is also easy to use. Graphical password consists selection of images in a sequence which the user has to select. The system developed makes use of a mobile application and website. The user registers using the mobile application. During registration phase the user sets the login Id password,graphical password and provides the IMEI number which are the essential parts of the system. After registration is done,the user needs to login with the login id password on the website as well as mobile application. Next step is to select the graphical password on the mobile appli-cation in proper sequence. On selecting the correct password the user will directed to QR Code scanner camera,the user will scan the QR Code which is displayed on the website. Once scanning is complete an OTP(One Time Password) is generated on the mobile application which the user needs to enter on the website and than the user will be verified based on the IMEI provided by the user using API(Application Program Interface) i.e. to check if the users smartphone’s IMEI number matches with the smartphone’s IMEI number the user had provided,if it matches the user is granted successful login otherwise not. In a modern world where we are able to do almost every-thing online (banking, shopping, communicating, storing and sharing personal information etc.), it is nowadays difficult to access these services in the most secured manner,therefore the system developed will help in avoiding many attacks from the hackers and secure user’s data.

Acc.No:PR1767

Title : JARO Interviewing Chat Bot

Author:ADITYA BAGWE, OJASWINI MANGAONKAR, RISHABH MEHTA, JITENDRA PUROHIT

Project Guide: Ms.Elizabeth George

Abstracts :According to a survey conducted by Mettl, a talent assessment and skill measurement company, in 2018, nearly 8 out of 10 Human Resource (HR) heads and business leaders find talent acquisition to be challenging for recruiters. Employers find it very taxing to communicate well with all their candidates. Also, in cases, where there are large volumes of applicants, communicating with thousands of candidates and conducting other screening duties add to the heap of recruitment problems. The project, JARO addresses the common concerns that a candidate faces when it comes to attending interviews. Some of the issues are inconsistency in questions, different days, different times of the day, interviewer's mood and venue of the interview and the list goes on. Therefore, JARO accelerates the interview process towards an unbiased decision-making process. JARO, is a chatbot that would conduct interviews by analyzing the candidates Curriculum Vitae (CV), based on which, it then prepares a set of questions to be asked to the candidate. The system will consist of features like resume analysis, speech-to-text recognition. The software would also ask questions based on the previous responses of the candidate. After the interview process is complete, the software would analyze the data collected to determine the right choice for the position offered. Thus the project, JARO chatbot proposes to streamline this process of hiring employees.

Acc.No:PR1768

Title : Medical Guide in Android

Author:PRIYESHA KAPADIA, TARUSHI JHA, BHAVANA JOSHI, DEEP MANEK

Project Guide: Mr.VAIBHAV KALA

Abstracts :Medical Guide system is the client server system which will help the user to find out what disease he/she suffers, as per the symptoms that the user had entered. The system will predict a list of illness that the user may be suffering from. Along with this the system will also predict the medicines that can be taken by the user. For the user to know more about the disease that he has been suffering from there are two links present on the application that will disperse more information about the disease which has been predicted by the application which the user may be suffering from. It will also help the user to identify medicines that are recommended for the predicted diseases.

This system will help to solve all the medical related issues from the smart phone only. The given modules for the medical guide project are Adviser Module: An adviser module will be there where user can get expert advice related to their issues as well. On demand, adviser can meet personally as well. User Module: When a user will make an account, then he or she will be using this module only. User can access each and everything available in this system using this module. Database Module: All the data, information and text documents will be maintained in this module. This module will also execute queries for activating some

particular kind of commands. This module maintains every information present in the system. Technologies used in the android project: Java, Android, Basic4Android, SQL, Ms SQL Server.

Acc.No:PR1769

Title : LibARi Advaced Book Searching Technique

Author:WIN CARVAHLO, ELTON DCUNHA, AARON DSOUZA, SAGAR FERNANDES

Project Guide: Ms.Vandana Patil

Abstracts :Modern days libraries are still comfortable with the Dewey Decimal Classification (DDC) as it still works for them this system is been used since late 1876 which was published by Melvil Dewey in United States. The Dewey Decimal Classification (DDC) has Ten main classes of subjects ranging from the numbers (000-900) this method introduced the concept of relative location and relative index which allowed new books to be added to the library in their appropriate location based on subjects. The problem with this current system is that it won't be able to help the user to find the exact location of the book. DDC system makes book searching more complex and time consuming. To overcome these drawbacks our system Lib-ARi (book searching technique) will make book searching faster more accurate and less time consuming. LibARi system will use Augmented Reality which will work through the camera application of the user's mobile device.The application will be designed with the help of android studio and Visual Studio. The main modules in the application will be OCR-Camera,Text-Search, Quiz Games and Maps.

Acc.No:PR1770

Title : Medtracker

Author:ADITYA AMIN, ANIKET ANAND, ATHARVA DANKE, MIHIR JADHAV

Project Guide: Ms.Grinal Tuscano

Abstracts :This is an Android-based application in which an automatic alarm ringing system is implemented. Patient need not remember their medicine dosage timings as they can set an alarm on their dosage timings. The alarm can be set for multiple medicines and timings including date, time and medicine description. Three times TTS for taking medicine notification given to patient. TTS option remind patient for medicine intake time. Patient add disease, medicine name and prescriptiontiming provided by doctor in our application. Patient receive three time notification for taking medicine. Patient need to acknowledge about the same. If patient is not acknowledge about medicine reminder on third TTS notification then SMS and call send to predefine number. Trips related to disease is given to patient. Patient can view previous disease history of their own.

Acc.No:PR1771

Title : SOS-Smart Ordering System

Author:AADITYA BORADIA, ROYSON PINTO, GLANITH MONTEIRO, NISHTHA BARIA

Project Guide: Ms.NITIKA RAI

Abstracts :In today's urban lifestyle, where in there is prominence of nuclear families with both partners working, managing daily household chores is a humongous task – both in terms of effort and time. There is a growing need to simplify the way we fulfil our daily needs of shopping from multiple vendors – accepting couriers, online deliveries, consumable bills, etc. The major issue is non- availability of residents during working hours. This project aims to develop a system, SOS (Smart Ordering System) as an aid to reduce stress, time and effort. SoS is a web based e-commerce application designed to make the everyday household chores be taken care with ease and comfort for the user.SOS aims to design a web based application addressing the common household chores such as accepting orders of online shopped items from multiple vendors or accepting couriers and consumable bills while the family is away, without stressing the user of being at home at the time of delivery and lets the user collect his all day long deliveries at his own convenience. The system will have enormous effect on the consumer's daily routine. System will be providing a web application interface where they can order their daily essentials from SOS. In this web application there will be certain stores whose products will be displayed. User can easily choose the item of his need and click on buy. Those commodities will be delivered to the locker by SOS boys. Besides, the locker system will be based on two categories, one will be system location wise, and in which people requiring our services will have certain centers areawise and the other type will be society based wherein the lockers will be built in in the complex by the builder, so people buying homes in those complex will have their own lockers in their own building. Moreover, the lockers which are location based will have soft key . The system will also allow user to redirect their other deliveries and couriers. Thus the system will provide hassle free shopping at the ease of user.

Acc.No:PR1772

Title : Automated personality classification

Author:RHEA SHAH, AKSHADA RANE, SHERWIN SOMAN, DENILA

Project Guide: Ms. Alvina Alphonso

Abstracts : Personality is dependent on how the person behaves. It is quite difficult to identify the personality of a specific person, it is usually judged on the first impression and their looks. Usually, it has to be defined on the basis of the characteristics of the person. In our system, we propose several new research directions regarding the issue by using the concept of Automated Personality Classification (APC). Here, we have used Twitter API's and the questionnaire dataset. The Twitter API accesses the various twitters and gives results on real time basis. Questionnaire set are also included through which the user has to just attempt the

questions genuinely, and the results will be displayed on the basis of 5 personality traits of OCEAN theory. This entire results are based on Sentiment Lexicon Analysis.

This system can be used by an organization , some recruiters or even psychiatrist to test it on the patients or by any individual to have an idea about their behaviour.

Acc.No:PR1773

Title : Analysis of Player's Action using human pose estimation

Author:VATSAL RATHOD, SUMIT VISHWAKARMA, SAHIL BHAT, ROMIT MEHTA

Project Guide:Snehal Dmello

Abstracts :Cricket has been played more than a century ago.It is 2nd most popular sport in world. All the nations who participate in international matches play the sport with whole integrity and pride. But there are few rules which can be deteriorated or violated easily. One of this is bowling action. If the bowler's upper arm and fore arm makes an angle more than 15 degree than it is considered as illegal action. As of now whichever system exist that either requires expensive equipment or does not provide effective solution in real time. Even in international matches cricket expertise decide the illegal action in real time which may not be precisely accurate, so the technique used in the project can provide a solution to this problem. The system will help to detect illegal action and will also give a summary on bowl-ing action with comparison to bowling actions of other renowned players. Using this system if a player has a illegal bowling action then the player can improve it's action and also the cost expenditure would be negligible. This system won't require any special hardware or equipment to detect the illegal action. System will provide all the results in real time .

Acc.No:PR1774

Title : Secure cloud storage and sharing using trap door

Author:HENRYL PEREIRA, ROYSTEN MENEZES, NACHIKET PAI, SHANE PEREIRA

Project Guide: Dr.Prachi Raut

Abstracts :Cloud computing is one of the most rapidly growing area which provides flexible, elastic and on-demand storage services for users. As cloud storage are growing rapidly data confidentiality, integrity and security in cloud storage system are always cause of concern. They are subject to attacks, modification and sometimes they even get stolen from storage system as our traditional security mechanisms doesn't provide enough security to our data. We are proposing new methodology which divides user data into sequenced parts and stores them among multiple Cloud storage service providers. Instead of protecting the data itself, the proposed scheme protects the mapping of the various data elements to each provider using a trapdoor function.

Acc.No:PR1775

Title : Traction control System for Bikes

Author:PLACID RODRIGUES, HARSHVARDHAN BARAD, VIVEK D'ABREO

Project Guide: Ms.Grinal Tuscano

Abstracts :The Traction Control System is the foundation to maintain the vehicle tractive performance and stability. In view of the characteristics of bikes, a traction controlmethod is designed to control the wheel slip rate by adjusting the engine torquedirectly. And through reasonable correction to the target wheel speed, a balanceof acceleration and stability of bike can be reached. The results of simulation andreal vehicle test show that the control algorithm can achieve the control target ofrestricting wheel slip of the bike on the uniform, split and opposite adhesion road.

Acc.No:PR1776

Title : Psychological mood analysis using neural network

Author:RAGHAV BAJORIA, MITHILA S. PATIL, SHAMLI AMBEKAR, RAHUL BHOGALE

Project Guide: Ms.MONALISA LOPES

Abstracts :In today's generation, internet and social media is everywhere. It is estimated that there will be around 2.77 billion social network users around the globe. Demographically it seems young adults with heavy use of social media platforms–two hours a day have twice the change of experiencing social anxiety, according to a study done in 2017. The study's researchers also found that partic- ipants who are online most frequently–defined as 50 or more visits a week–have three times the odds of perceived social isolation as those who went online less than nine times a week. Also it isn't just young adult's affected by the social media-loneliness conundrum. It can be adult's, stuck in their routines and feeling unable to discover new ways to find and foster friendships offline. This system uses sentiment analysis which is based on analyzing those particular individual's mental state, their psychological condition and whether they are severely depressed. Social media channels data sets that are gathered can be analyzed and presented in such a way that it becomes easy to identify if the online mood is positive, negative or neutral.

Acc.No:PR1777

Title : EazyMart

Author:NARENDRA SUTHAR, VANDANA SINGH, AKSHAR SONI, SHIVANI MORE

Project Guide: Ms.Renia Lopes

Abstracts :EazyMart is a B2C application which allows consumer to directly buy grocery from a nearby vendor using an Android Application. This Application collab- orates online grocery shopping with the premium delivery of grocery. Also it provides rapid growth in local business by networking neighbourhood shop/ven- dors with the consumers. EazyMart

provides the user with a catalog of different types of groceries available in the store. It is designed from the consumers as well as grocer's point of view. This application will let consumer to view and order grocery from the nearest local store. The user friendly design helps the users in accomplishing their task with ease. Attempts have been made to keep the design simple and understandable. The screens were designed in XML and the business logic was written in Java. The total lines of code written in this application are Java (programming), XML (user interface).

Acc.No:PR1778

Title : Architect: A marker -less Augmented Reality Applicayion for innovative marketing of Architect Portfolios

Author:REMON PEREIRA, SAHIL RAUT, SHRADDHA PAWAR, MONESHA MURDESHWAR

Project Guide: Ms.Sonali Vaidya

Abstracts :Promotion of Architectural projects nowadays involves the use of non-portable 3D models or rendering them into images with improved aesthetics. With the recent emergence of better cameras and more accurate sensors in soon-to-be mainstream devices, Augmented Reality is transitioning from image or QR code based activations to marker-less Augmented Reality experiences. This paper presents an innovative way of marketing the architect's portfolio using a mobile Augmented Reality application named ARchitect. The Architects plans for their project are visualized in a portfolio that is used as target for displaying the specific 3D models. The proposed application includes storing of the models in online datasets and its retrieval on scanning target object to facilitate reduction of application size. The application helps improving the user experience by making the process of browsing the portfolio interactive, user-friendly and portable.

Acc.No:PR1779

Title : Restaurant Recommendation System

Author:KEWIN SHAH, GIRISH SAVLESHA, ROHAN KADAM

Project Guide: Ms.Mrinmoyee Mukherjee

Abstracts :The aim of this project is to develop a recommendation system which gives the user personalized recommendation. The recommendation system is based on collaborative filtering, content based filtering, and hybrid filtering approach that uses the group knowledge in order to recommend new restaurants that matches the user's personality. The existing recommendation systems are solely dependent on past location of the user. Due to this, the recommendations given are not dependent on the personal liking's of the user. Such recommendation are not likely to be favored by all users as these restaurants might not be suitable for them and the user might end up leaving the application which will in turn reduce

the popularity of the application. We plan to eradicate this problem and introduce a hybrid algorithm to serve better recommendations.

Acc.No:PR1780

Title : Automated Loan Approval System

Author:NISARG SHAH, PRATIK SHAH, ANUJ SHASTRI, MANAN SHUKLA

Project Guide: Ms.Renia Lopes

Abstracts :Automated Loan Approval System upgrades the existing manual loan verification and credit ranking system. This reduces the risk of losing a great amount of fortune and helps in bulk processing. This results in increasing the efficiency and service capabilities of bank,giving rise to better business and reputation.

Acc.No:PR1781

Title : Fake News Detection using Machine Learning

Author:DISHA MODI, SWATI MODI, POOJA PATEL, NOELLA THOMAS

Project Guide: Ms.Amrita Mathur

Abstracts :Due to reduced internet costs and ease of internet access, people are more exposed to satire, clickbait, hoaxes and several other misleading contents which is commonly referred to as Fake News. Fake news leads to a lot of misunderstandings like creating a bias in elections, chaos, and confusion regarding the current events. Hence it is very significant to distinguish between fake and real news and restrict the widespread of fake news. The proposed solution is to make use of a hybrid approach of stance detection and document similarity to detect whether a news article is fake or not. A chrome extension and a website are developed which will allow users to check if the article they are reading is fake or real. Stance detection is the task of automatically determining from the text whether the author of the text is in favor of or against of a target of interest. Another strategy we are using for Fake News Detection is Document Similarity, an Instance based learning approach that compares content of article with a no. of web pages available on the internet related to it. The related web pages are determined by querying the headline to search engines and considering the top n search results. The similarity between the articles is calculated using cosine similarity with TF-IDF. We also search for refuting words in the articles and then compute and output a score for the classification of the news.

Acc.No:PR1782

Title : Virtual Clothing Try-on using Augmented Reality

Author:SHREYASH SHETTY, NIHAL SHETTY, NEHA SHARMA, RIKEN SHAH

Project Guide: Ms.Sonali Vaidya

Abstracts :The ever-increasing use of internet has now made everything online. One of the industries to gain a lot of advancement and popularity is the e-commerce industry. However, major dis- advantage lies in the logistics concerned with the return and exchange of products. One of the reasons for such inconvenience is inappropriate visual representation of clothes on one's body. Various known e-commerce sites fail to provide solution for trials of clothes before purchase. Due to this, Virtual try-on of clothes has received much attention in the recent times. The project focuses on Augmented Reality for clothing trial to offer real life experience to the end users.Augmented reality is the integration of digital information with the user's environment in real time. The user can virtually try clothes of their desired choices using the phone camera. This application of virtual clothing try-on would probably reduce costs and the process of trying several clothes will be easier and faster for the consumers.

Acc.No:PR1783

Title : Shopping Buddy

Author:SHRUTI THUMAR, SRISHTI YADAV, PUNIT SHAH, AMIT VISHWAKARMA

Project Guide: Dr. Prachi Raut

Abstracts :The conventional shopping process is very time-consuming and cumbersome for the sick, the elderly and families with toddlers. Online shopping businesses easily gather data about user behavior, choices and opinion. There is no such facility for retail or wholesale stores. Large workforce is required to manage stores and inventories. Long queues and crowded stores may drive away customers. Therefore, a shopping assistant application would be useful in creating a better shopping experience for customers while increasing profits for the stores. The proposed solution is cheaper to implement than handheld scanners, which have been in use in supermarkets and wholesale stores.

This project aims at developing an android based M-commerce application that would help improve the conventional shopping experience while helping businesses to increase their customer base and revenue. The project would require mobile devices with our application installed on them.

The Android application provides a QR Code scanning feature with budget monitoring and would help automate the billing process thereby reducing checkout queues. The application also provides a feature through which the user can get the optimum shopping route for product through the market.

Acc.No:PR1784

Title : Career Counselling

Author:SHOHAN SHETTY, PRANAV SHAH, LAKSHIT UKANI, PRIYANK JETHVA

Project Guide: Dr. Nazneen Ansari

Abstracts :Selecting an appropriate career is one of the most important decisions and with the increase in the number of career paths and opportunities, making this decision has become

quite difficult for the students. At times, people tend to get deceived by fraudulent counsellors who suggest colleges to students where they get a commission. Also, visiting a number of counsellors is very time consuming and involves a lot of capital. Counsellors suggest a career to students based on their knowledge and perspective only. Hence, to be certain, students tend to take guidance from various graduate students. Hence we have designed an efficient and comfortable option to predict career using machine learning algorithms. Problems like increased dropouts, poor performances, surprised college, degree changes and costly readmissions impacts one's role in job and real-world industry. According to the survey conducted by the Council of Scientific and Industrial Research (CSIR), about 40\% of students are confused about their career options. This leads the students to select a wrong career and may result them working in a field which was not meant for them. With machine learning algorithms, we can analyze the current trends and statistics of various graduate students and utilize them to predict an appropriate career for new students. Hence, in the system, we have built a machine learning model using graduate students data and the model that gives out the highest accuracy between Naive Bayes and Random Forest classifier will be used to predict career for students. Moreover, this system provides details about the available career opportunities and updates on career counselling events. Additionally, there is also an option to book a doorstep visit for the counsellor to get an in-depth explanation of the analysis provided by the system.

Acc.No:PR1785

Title : Analysis and Prediction of Crime against women

Author:PRIYA MISHRA, ASMI PATEL,NAMRATA POOJARY, DHWANI SHAH

Project Guide: Ms.Alvina Alphonso

Abstracts :As the crime rates against women are increasing day by day, new problems are faced by the law organization. It causes more burden on the crime against women resources. The law organization is able to generate such increases or decreases in crime, so it is necessary to find out the most useful method to control and avoid crimes against women. Analysis and prediction of crime are essential for providing safety and security to the population. Using data mining, we can discover critical information which can help authorities detect crime and areas of importance. The aim of this project is to classify clustered crime against women based on occurrence frequency during different years by the process of Data mining. Data mining is used to analysis, investigate and discover patterns for the occurrence of different crimes against women. Crime against women is referred to as physical or mental cruelty shown towards women. In India, it is a very old social issue which has taken its root deeply to the societal norms. This issue of crime against women emerges time to time in various forms like rape, kidnapping, dowry deaths, immoral trafficking, cruelty by husbands and in-laws, etc. Based on data analysis of last decade, near about 2.24 million crimes against women were reported then, whereas now one complaint is reported in every two minutes. We have create different clusters based on different crimes and predicted the crime rate for the next year.

Acc.No:PR1786

Title : Personality Prediction using Social media behaviour

Author:JOVITA MENDIS, SAIRA TUSCANO, VINIT PATKAR, SAHIL REBELLO

Project Guide: Ms.Shree Jaswal

Abstracts :Personality is a combination of an individual's behavior, emotion,

motivation, and thought-pattern characteristics. Our personality has great impact on our lives, it affects our life choices, well-being, health, and numerous other preferences. Personality is typically formally described in terms of the Big Five personality traits: Extroversion (EXT), Neuroticism (NEU), Agreeableness (AGR), Openness (OPN), Conscientiousness (CNS).

The Social Media is platform where mass populace shares opinions and expresses reactions to a particular event according to their personality. Texts often reflect various aspects of the writer's personality. In this project, we propose a system which implements the convolutional neural networks to create model which can extract personality traits through processing of the text-based attributes from user's post on social media platform.

Acc.No:PR1787

Title : Classical Music Classification

Author:VENITTO CHETIAR, DEXSON DSOUZA, FREYA DSOUZA,FENI MARTINA FERNANDO

Project Guide: Ms.Prajyoti Dsilva

Abstracts :Music plays an important role in the life of people. Not only does it help in reducing stress and affecting the emotions of a person but also it helps in enhancing the performance both physically and mentally. Music can be of various genres like Classical, Rock, Metal, Pop, Jazz, Blues, Hip-hop, etc. This project focuses mainly on the Classical genre of music. Classical music has more benefits on a person than any other genre. Few of the benefits include: it makes the brain work better, reduces stress and thus helping in a person sleep better, it also helps in expressing emotions better and thus reduces pain both emotional and physical. This project classifies the classical music into its four major sub-genres i.e. Opera, Renaissance, Orchestral and Baroque. The dataset is divided into training set and testing set. The training set is trained using algorithms like K-Nearest Neighbor, Random Forest, Support Vector Machine, Multi-Layer Perceptron, Recurrent Neural Network. The genres are classified using features like dynamic, rhythmic, tonal and spectral. By using different classifying algorithms as mentioned above, the generated results are expected to give an accuracy of approximately 70%.

Acc.No:PR1788

Title : Classifying of App reviews

Author:BHAVESH SANGHVI, SAGAR VANKIT, JIJO VALIYAVEETTIL

Project Guide: Ms.MONALISA LOPES

Abstracts :Application stores like Google Play and Apple have over 3 Million apps covering nearly every kind of software and service. Billions of users regularly download, use and review these apps. Recent studies have shown that reviews written by the users represent a rich source of information for the app vendors and the developers, as they include information about bugs, ideas for new features, or documentation of released features. Our project introduces several probabilistic

techniques to classify app reviews into three types: bug reports, feature requests and praises. For this we use review metadata such as the star rating and the tense, as well as, text classification, natural language processing and sentiment analysis techniques. We can further combine it with natural language processing for better accuracy.

Acc.No:PR1789

Title : PARKEZ - Parking Management System

Author:NIRANTAK RAGHAV, HET SHAH, MANAN SHETH

Project Guide: Dr. Nazneen Ansari

Abstracts :Traffic has always been a serious issue in metropolitan cities. Adding fuel to the fire, the improving standard of living, has led to people purchasing more private vehicles. The most frustrating thing while driving is finding an open parking space for your vehicle. Due to this, people park their vehicles along the roadside or in no parking zones, which lead to traffic and towing.

As a solution to this government has established public parking spots at various places. However most of these places are underutilized due to lack of awareness. Parkez is a platform that aims to solve this problem by providing an accessible application to users, and ease of management for parking space providers. This platform allows you to book a parking spot by leveraging both public and private spaces, thus reducing roadside parking that causes congestion and also protects the vehicle from damage or theft.

Hence such an application which will be a win-win situation, as the government will be benefited by reduced peak hour traffic, the parking lot usage increases, and the vehicle owners are assured of the safety of their vehicle.

Acc.No:PR1790

Title : Android PC Controller

Author:NITIN MAURYA, RAHUL D'SILVA, GANESHKUMAR SAW, CASTER DENIS

Project Guide: Ms.Priyanka Ghonsalves

Abstracts :The existing remote control systems used technologies that have many draw-backs like the Bluetooth and hardware based systems where the functionality of the server would be based on the performance of the hardware adapter. Also the availability of the hardware adapter would be of concern as the old desktop computers were not embedded with hardware Bluetooth and infrared adapters. Hence the functionality would only be limited to that of laptops or the systems that would have the internal adapters in them. Hence our main goal is to create an remote control application that would use the interface that can be used in all the systems without the drawbacks of the existing systems or to minimise the drawbacks to maximum extent.

Acc.No:PR1791

Title : Shoulder Surfing Resistent password system using Colour shuffling

Author:JESSICA THOMAS, CRAIG SALIYAN, RENNIE CARDOZA, SURAJ SINGH

Project Guide: Ms Minal Lopez

Abstracts :With each passing day, the world we live in becomes more and more advanced. In a world like this where everything is online, security becomes crucial. We mostly use the internet for our day-to-day chores like banking, business, communication, etc. When we use the internet, we require more security of our own accounts, and if our system lacks strong security then many issues arise For that purpose, more and more stringent password authentication security systems are coming into existence. Shoulder surfing refers to the practice of spying on the user of a cash-dispensing machine or other electronic devices in order to obtain their personal identification number, pass-word, etc. We are proposing a system that will ensure security and reduces shoulder surfing by the inclusion of colours and textual passwords together. Thus making it an effective way to counter shoulder surfing without the use of any hardware device. The system is divided into 2 main phases one is the registration phase and the second is the login phase.

Acc.No:PR1792

Title : Inconspicuous Perception

Author:ROBIN ANTHONY, SHRUTI PEDNEKAR, TILSY THANKACHAN, YASH MALHOTRA

Project Guide: Ms.Prajyoti D'Silva

Abstracts :There are many orphanages contemporaneously available that are already working for the burgeoning of street child or OAS (Orphaned, abandoned, surrendered) children but there is no way/solution that bridges the gap between the street children, OAS and the orphanages. There are many cases where the involvement of children are observed. This project aims at creating a web application that links all the orphanages together with the NGO’s and the focus will be both on the orphans and the street children and to register them to an orphanage or NGO. The web application will thereby make use of Machine Learning algorithm to classify the child encountered living on the streets or an OAS category into

either a Juvenile or Juvenile Delinquent and further care will be taken to mould them in a better way. The application also contains a separate section for the Lost and found where in case if the child is lost, the user can directly register the lost case in the application where that case will be taken care of. In addition to the categorization of child and the Lost and Found Category, there is one more aspect of Medical Diagnosis. The child acquiesced to the orphanage, will be tracked by the Admin as to whether the medical diagnosis of the child is done in the stipulated time or not. The expected result of this project aims to register the child encountered on the street to the nearest orphanage and to diagnose the child within a stipulated time to ensure that the child is disease-free.Various machine learning algorithms will be considered for the project and the one that provides higher classifier accuracy with proper confusion matrix will be considered. After looking at the contemporaneous scenario, we hereby put forth a proposed solution “Inconspicuous Perception” - by the name itself “inconspicuous” means something which is invisible or unclear. The condition of children is so indiscernible to the people that they don’t treat the children well. Today’s perception has created a downfall for the upcoming generation and youth. Hence it becomes really necessary for people like us to do something good for needy people.

Acc.No:PR1793

Title : Smart Traffic Control System

Author:ANKITHA RAI, HELI SHAH, RHEANN SEQUEIRA, SHIVANI SAWANT

Project Guide: Ms.KIRAN ISRANI

Abstracts :The current traffic control system in Indian cities can be improved as it does not take into consideration the randomness in the traffic density. A large amount of time is being wasted at the signal even though there is no traffic because the timings for red and green light are fixed for all the lanes, irrespective of the traffic density. The loss of the valuable time caused by the traffic jams is not at all good for a Nation’s economical growth. In addition, it results in more wastage of fuel by stationary vehicles only contributing more to the environmental pollution. Currently the traffic signals have fixed signal timings which change every 30 sec to 120 sec. Such timings which are predetermined are inadequate for real time applications of the traffic control system. In order to control the traffic in efficient way this system categorises the lanes into high, medium and low density based on the number of vehicles present at each lane and dynamically assigns the signal timings.

Hence this system helps people to reduce the wastage of time and fuel that occurs at the signal.

Acc.No:PR1794

Title : Toxic Comments Classifier

Author:SHARAD SWAMINATHAN, DHRUV MULYE, SRIKANTH VARANASI

Project Guide: Ms.Elizabeth George

Abstracts :Social media although pivotal to the modern world, has a multitude of pitfalls and negative impacts, such as cyber-bulling, body-shaming, harassment, etc. The main purpose of the project is to develop a classifier for toxic comments on social media (Twitter) and develop a website for its testing and demonstration. The proposed system efficiently analyses the tweets and classifies them into different categories, namely, toxic, severely toxic, obscene, threat, insult, identity hate. User can interact with the system through a simplistic and user-friendly interface. The classifier model is developed using Capsule Networks. Capsule Networks were designed primarily as an improvement on Convolutional Neural Networks. The proposed project is also useful in testing the efficacy of Capsule Networks in the field of Natural Language Processing.

Acc.No:PR1795

Title : Sentiment Analysis for Airlines reviews

Author:KINGSLEE PEREIRA, KIMBERLEY REMEDIOS, ARCHANA SHETTY, SWARA SHIRSAT

Project Guide: Ms. Amrita Mathur

Abstracts :Customer feedback is very crucial to Airline companies as this helps them in improving the quality of services and facilities provided to the customers. Sentiment Analysis in Airline industry is methodically done using traditional feedback methods that involve customer satisfaction questionnaires and forms. With the rising demand and advancements of Big Data technologies in the past decade, it has become easier to collect tweets and apply data analysis techniques on them. Twitter is a much more reliable source of data as the users tweet their genuine feelings and feedbacks thus making it more suitable for investigation. Once the airline tweet are collected, they undergo pre-processing to remove unnecessary details in them. Sentiment classification technique is then applied to the cleaned tweets. It can be achieved by analysing different classification strategies-Decision tree, Random forest , SVM, K-Nearest Neighbours ,Logistic Regression, Gaussian Naive Bayes, AdaBoost. We are using AVC and AAC algorithm to implement this solution as it gives more accurate results compared to other classifiers.

Acc.No:PR1796

Title : Krishi Kalyan Portal

Author:VINITH NAIR, TANMAY KELUSKAR, LENIN RODRIGUES, PARTH KOTADIA

Project Guide: Ms.Nitika Rai

Abstracts :India has an agricultural economy; implying it is highly dependent on the sustainable yield of the crops. Unfortunately, the production of crops has decreased by 15-25% over the last few years with crop diseases being the main culprit. The diminished crop yield and productivity has led to a decline in the country’s economy and subsequently has also failed to suffice the needs of the rapidly increasing population. Consequently, the

farmer’s community has been profoundly affected. The idea is to tackle two vertices of the disease triangle. The first is the environmental conditions which include various parameters like weather conditions of the land taken into consideration, and the second is the susceptible host characteristics. This project aims to predict the weather and soil conditions for a particular period of farming. This is done by creating weather prediction model and rainfall prediction model using machine learning algorithms and then training the dataset using three different prediction algorithms. Thereafter, a prediction of the diseases that a crop can contract on the basis of the weather and soil vectors is provided. These prediction techniques will assist the farmer in taking appropriate disease prevention techniques and increase the productivity and quality of their yield. Further a comparison of three prediction algorithms is also carried out.