Number of Book Chapter per teacher during the year 2021-2022

S. NO	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National /	ISBN number of the	Affiliating Institute at the time of publication	Name of the publisher	Relevant link
1	Mr.P.Rajendra Prasad	Challenges and Possible Solutions for emerging trends in Technologies	Android Malware Detection Using Genetic Algorithm Based Feature Selection and Machine Learning	NA	NA	NA	978-93-5627-706-9	Vignan' s institute of Management and Technology For Women	Immortal Publications	https://img.immortalpublications.com/book-details?id=95
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15	Mr.G Ganesh Reddy	Challenges and Possible Solutions for emerging trends in Technologies	IOT based smart safety helmet or motorcyclist for avaoiding head injuries	NA	NA	NA	978-93-5627-706-9	Vignan' s institute of Management and Technology for Women	Immortal Publications	https://img.immortalpublications.com/book-details?id=95

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Challenges and possible solutions for Emerging Trends in Technologies, This book addresses emerging Trends in Technologies. It also addresses various challenges being faced by Emerging Technologies like Machine Learning, Deep Learning, Artificial Intelligence, and Internet of things, Network Security, Cloud Computing, Image Processing and Signal Processing. Various Authors provided possible solutions for different problems using Emerging Technologies through this Book Chapter.

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Android Malware Detection Using Genetic Algorithm Based Feature Selection and Machine Learning

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Abstract

With the market share of Android system becoming the first in the world, the security problem of Android system is becoming more and more serious. How to effectively detect Android malware has become a significant problem. Permissions and API calls in Android applications can effectively reflect the behaviour patterns of an Android application. Most researchers have only considered a single permission or API feature, and did not consider associations and patterns inside the permission or API features. Some scholars have also tried to find the combination modes inside the permission features in malwares, but the detection of maliciousness according to this combination mode is too absolute. This paper proposes a malware detection method, which combines the advantages of frequent pattern mining and Naive Bayes to effectively identify Android malwares.

Keywords: *AI, ML, Android, Malware Detection, Genetic Algorithm.*

Introduction

With an estimated market share of 70% to 80%, Android has become the most popular operating system for smartphones and tablets. Unsurprisingly, cyber-criminals have followed, expanding their malicious activities to mobile platforms. Mobile threat researchers have recognized an alarming increase of Android malware from 2012 to 2013 and estimate that the number of detected malicious applications is in the range of

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Detection of Fake Profiles on Social Networks using Machine Learning ANN & SVM Algorithms

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Abstract

Social Networks plays an important role for internet users to carry out their daily activities like content sharing, news reading, posting messages, product reviews and discussing events etc. At the same time, various kinds of spammers are also equally attracted towards these social media. These cyber criminals including sexual predators, online fraudsters, advertising campaigners and trollers etc. These guys are creating fake profiles to spread their content and carry out for scams. All these malicious identities are very harmful for both the users as well as the service providers. From the social media service providers identify those accounts and check it is genuine or fake. In this Paper we proposed many classifications algorithm like support vector machine algorithm and neural network. These algorithms help to detect the fake profiles on social media.

Keywords: *Artificial Intelligence, Machine Learning, Social Networks, ANN, SVM.*

Introduction

In the present generation, everyone in society has become associated with the social media. These social media have made a drastic change in the way we pursue our social life. In this Paper using Artificial Neural Networks we will identify whether given account details are from genuine or fake users. ANN with SVM algorithm will be trained with all previous users fake and genuine account data and then if we gave new test data then that ANN train model will be implemented on new

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AI Based Crop life prediction and analysis using Machine Learning Techniques

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Abstract

This Paper relates to the research area of crop yield prediction, and it provides better decision making in farm management and planning. Pesticide's quantity and dosages are not being considered in the existing studies. Based on studies, the proposed work is focused on prediction of crop pesticides requirement based on ground conditions and its impact on plant cultivation. So, it is necessary to consider the dosages and it gives better information for different crops along with pesticides dosages and this Paper proposes a model and compute reduction of pesticide dosages by introducing the compost pit calculation and tells best crop yield based on season and area and analyzes the moisture content for each crop.

Keywords: *AI, Machine Learning, SEBAL, APAR, GIS.*

Introduction

Agriculture is one of the main supporting sectors of the Indian economy and most of the rural population depends on it for livelihood. India is a country that is rich in terms of food and environmental resources. Nevertheless, such prosperity is gradually reducing and resulting inflow agricultural productivity and low income for the farmer. Farmers additionally lacked insights into agricultural marketing strategies and high-quality production planning. The agriculture sector provides about half the amount i. e. , 52 percent of the total number of jobs available in India,

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Challenges and Possible Solutions for Emerging Trends in Technologies

AI Based Identification of Gender from Images Based on Facial Features using CNN and OPENCV

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Abstract

The main objective of this paper is to classify the gender based on different facial features such as eyes, nose, mouth, overall features such as face contour, head shape, hair line etc. The gender classification algorithm uses machine learning technique (supervised learning). In this case the algorithm is trained on a set of male and female faces and then used to classify new data. In this paper, face detection and gender classification methods are combined. The face detection acts as a pre- processing operation to the gender classifier that determines the gender. There are multiple methods in which facial recognition systems work, but in general, they work by comparing selected facial features from a given image with faces within a database. It is also described as a Biometric Artificial Intelligence based application that can uniquely identify a person by analyzing patterns based on the person's facial textures and shape. Automated gender recognition plays an important role in many application areas such as human computer interaction, biometric, surveillance, demographic statistics etc. Existing systems has a disadvantage in accuracy. Though there are many algorithms in Present system are being developed and implemented to achieve accuracy in identifying gender the results arestill unsatisfactory. Proposed system has an advantage of accuracy. The accuracy achieved in this system is impressive compared to the existing system. CNN algorithm gives better accuracy compared to other algorithms.

Keywords: *AI & ML, CNN, DNN, OpenCV, Image Processing.*

Introduction

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Signature Recognition and Verification Using Machine Learning Softmax Regression Model

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Abstract

In today s world forgery of signature is very widely increased. There are many " " sophisticated scientific techniques to identify a correct signature. As signatures are widely accepted biometric for authentication and identification of a person because every person has a distinct signature with its specific behavioural property, so it is very much necessary to prove the authenticity of signature itself. A huge increase in forgery cases relative to signatures induced a need of Signature recognition system. However human signatures can be handled as an image and recognized using computer vision and neural network techniques. In this paper we have taken a set of trained images and stored their features in a database and to test an unknown image we compare the features and calculating the matching factors. We have considered 70 % as threshold for human signature recognition. Regarding creation of recognizer we gave considered HARRIS and SUFR Features. efficient "Signature Verification System.

Keywords: *SRVS, AI&ML, CNN, Softmax regression model.*

Introduction

Machine learning is the study of computer algorithms that improve automatically through experience and by the use of data. It is seen as a part of artificial intelligence. Machine learning algorithms build a model based on sample data, known as "training data", in order to make predictions or decisions without being explicitly programmed to do so. Machine learning algorithms are used in a wide variety of

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Challenges and Possible Solutions for Emerging Trends in Technologies

Real Time Drowsiness Monitoring System for Automobiles Drivers using Deep Learning Techniques

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Abstract

Drowsiness driving is one of the major problems worldwide and especially in the United States of America. According to National Highway Traffic Safety Administration (NHTSA) statistics, around 90, 000 crashes caused from drowsiness driving between 2015-2017, while the reported deaths approached 4000 people from 2013-2017. There are several reasons making people sleepy while driving; one of the studies shows that driving for a long period of time makes the driver lose their self-judgment and concentration. Sleepiness will affect driver's ability to observe surrounding things to drive safely. There are cases where driver takes medicines that may cause drowsiness and after long working hours or on journeys after long shifts and night shifts. Driver's inattention might be the result of a lack of alertness when driving due to driver drowsiness and distraction. Driver drowsiness involves no triggering event but, instead, is characterized by a progressive withdrawal of attention from the road and traffic demands. Both driver drowsiness and distraction, however, might have the same effects, that is decreased driving performance, longer reaction time, and an increased risk of crash involvement.

Keywords: *AI&ML, NLP, Deep Learning, CNN, EEG.*

1. Introduction

According to National Sleep Foundation (NSF), there are some physical signs of drowsiness that can alert a driver to stop and rest such as, frequent blinking, yawning repeatedly, eye closure continuously, and/or keeping his/her head up. Earlier

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IoT Based Air Pollution Detector using Wireless Sensor Networks Techniques

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Abstract

The regulation of air pollution levels is rapidly increasing, and it is one of the most important tasks for the governments of developing countries, especially India. It is important that people know what the level of pollution in their surroundings is and take a step towards fighting against it. The meteorological and traffic factors, burning of fossil fuels, industrial parameters such as power plant emissions play significant roles in air pollution. Among all the particulate matter that determines the quality of the air. When its level is high in the air, it causes serious issues on people's health. Hence, controlling it by constantly keeping a check on its level in the air is important. This can be found by using the machine learning algorithms. Therefore, the system would monitor the air pollution in real time and predict the measurements in the next given time interval. The data would be sent to the network using WiFi connectivity and the system was comprised of Arduino UNO V3, ESP8266 WiFi module and MQ2 gas sensor for the initial stage development. This gives help to city planning. Air is one of the most crucial elements in the life of human beings. In today's world, air pollution is rising at an alarming rate because of which there is climate change, and this has adverse consequences on everyone. The air around us is getting polluted because of the release of poisonous gases by industries, vehicle emissions which leads to an increase in the concentration of harmful gases and particulate matter in the atmosphere. The emission of various toxic gases from industries and vehicles is precarious for both the terrestrial organism, as well as marine life. Health problems like stroke, heart diseases, lung cancer, respiratory diseases, etc are

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A Novel Mechanism for Contrast & Color Improvement Based Haze Removal of Underwater Images Using Fusion Technique

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Abstract

Scattering and absorption of light in water leads to degradation of images captured under the water. This degradation includes diminished colors, low brightness and undistinguishable objects in the image. To improve the quality of such degraded images, we have proposed fusion based underwater image enhancement technique that focuses on improving of the contrast and color of underwater images using contrast stretching. Our proposed method is very simple and straightforward that contributes greatly in uplifting the visibility of underwater images. In order to improve the visual quality of underwater images we proposed fusion based technique, in which we removal haze caused by suspended particles in water. In order to improve the visual quality of underwater images, we proposed a fusion based technique by which combines the Contrast Limited Adaptive Histogram Equalization (CLAHE) and Guided filter approaches. Initially, the Contrast Limited Adaptive Histogram algorithm is applied on components of the input image to equalize the colour contrast in images. Secondly, the Guided filter approach is applied on the result of first step to improve the colour contrast and solve the issue of lighting. The main idea behind our approach is to make use of only the original degraded image. Instead of merging multiple images taken in different environments. Strength of our approach lies in the choice of appropriate inputs and weight map images.

Keywords: *Haze image, CLAHE, guided filter, fusion technique*

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Challenges and Possible Solutions for Emerging Trends in Technologies

Artificial Intelligence based Smart Warehouse Management in Aviation Sector

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Abstract

The advancements in the technologies, the revolution in the business procedures and the entailment to modify the operation in the warehousing as the result of the accumulating orders along with the complications involved in it, and the shortage in the management skill has paved way for the emergence of the smart ware housing. The importance of intelligent warehouse management is very much highlighted during and after the breakout of COVID - 19.

The world is gradually moving towards automation of manual operations which can't be scaled up during peak hours. With warehousing taking a major part in the supply chain and playing an important role in logistics, smart warehousing has become mandatory to improve organizational management and growth. The use of AI in warehousing operations strengthens warehousing functioning in logistics, management and coordination. In this Paper, utilizing AI-based algorithms increases the work efficiency of the Aviation sector.

Keywords: *Artificial Intelligence, Pure greedy algorithm, orthogonal greedy algorithm, Relaxed greedy algorithm.*

Introduction

Artificial Intelligence is an approach to make a computer, a robot, or a product to think how smart human think. AI is a study of how human brain think, learn, decide and work, when it tries to solve problems. And finally, this study outputs intelligent software systems. The aim of AI is to improve computer functions which are related to human knowledge, for example, reasoning, learning, and problem-solving.

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Automated Interactive Agent Using Artificial Intelligence and Machine Learning

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Abstract

Specifically it will look at development of Interactive agent as a channel for information distribution. The program selects the closest matching response from closest matching statement that matches input utilizing WordNet, it then chooses response from known selection of statements for that response. The paper comes under a major Domain of AI. It also has a sub domain as machine learning, because machine learning algorithm is used in this paper. The scope of this paper is to show the closest match of the input which is provided by the customer. It interacts with a customer until the customer queries get solved. It is used in the business website purpose. Natural Language Processing, allowing users to communicate with college Interactive agent using natural language input and to train Interactive agent using appropriate Machine Learning methods so it will be able to generate a response. There are numerous applications that are incorporating a human appearance and intending to simulate human dialog, yet in most part of the cases knowledge of Interactive agent is stored in a database created by a human expert. ***Keywords:*** *AI, ML, NLP, Chat Bot*

Introduction

Interactive agent applications streamline interactions between people and services, enhancing customer experience. At the same time, Agent offer companies new opportunities to improve the customers engagement process and operational efficiency by reducing the typical cost of customer service. To be successful, an Interactive agent solution should be able to effectively perform both of these tasks. Human support plays a

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Challenges and Possible Solutions for Emerging Trends in Technologies

Creating a Chatbot Using Python and Machine Learning Techniques

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Abstract

Chatbots in Python have become wildly popular in the tech and business sectors. Chatbots is a present new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form. A chatbot allows a user to simply ask questions inthe same way that it would address a human. Chatbots are currently being take up at a high rate on computer chat platform. Chatbot applications are streamline interactions between people and services, enhancing customer experience. From e-commerce firms to healthcare institutions, everyone seems to be leveraging this nifty tool to business benefits. At the same time, it offer companies for a new opportunities to improve operational efficiency by reducing the cost of customer service.

Keywords: Chat Bot, AI, Machine Learning, Python.

Introduction

Technology plays a solid role in the industry and in daily routine task. It serves a variety of purposes and is applied in a different way in different parts of the world. Recently, the public has been fantasized by Artificial Intelligence. To be more precise and closely related to humans, the AI Chatbots are now replacing human responses with this software. A Chatbot is a computerized program that acts like a chitchat between the human and the bot, a virtual assistant that has become exceptionally popular in recent years mainly improvements in the areas like artificial intelligence, machine learning and other underlying technologies.

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Challenges and Possible Solutions for Emerging Trends in Technologies

Liver Cancer Detection Using Artificial Neural Networks Image Processing Techniques

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Abstract

The bizarre boom of cells in the liver reasons liver most cancer which is additionally acknowledged as hepatic cancer, where, Hepatocellular Carcinoma (HCC) is the most frequent kind of liver most cancer which makes up 75% of cases. The detection of this tumor is tough and usually discovered at superior stage which motives life-threatening issues. Hence it is some distance fundamental to find out the tumor at an early stage. So that precept intention of this task isto realize liver most cancers at beforehand stage the use of photograph processing technique. Here the malignant liver tumors are detected from Computed Tomography (CT) Images. The photo undergoes enhancement the usage of anisotropic diffusion filters and segmented with the aid of morphological operations which is a easy and handy to work. This operation makes use of mixture of two processes, dilation and erosion. The scope of this propounded approach is to spotlight the tumor vicinity existing in the Computer Tomography.

Keywords: *Liver Cancer, Hepatocellular Carcinoma (HCC), Image Processing, Tumor Detection.*

Introduction

The formula of the time period most cancers used to be in 460 - 370 BC. It is credited to the Greek Physician Hippocrates who is regarded as "FATHER OF MEDICINE". Billions of cells in our

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Challenges and Possible Solutions for Emerging Trends in Technologies

Emergency Alert for Women's Safety with Location Tracking

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Abstract

The world is becoming so much more unsafe for women. Social evils like molestations, dowry, crime against women, worst among all is rape is on the rise in many countries. Incidents of crime against women have been increasing at an alarming pace in Indian cities, most common incidents being rape, kidnapping, sexual harassment and eve teasing.. Security for women is still a major issue as the number of crimes over women and girls is increasing day-by-day. In this age of technology, mobile phone is one gadget almost everyone uses to keep in touch with family and friends. All they need is a device that can be carried around easily and worn whenever the woman feels unsafe.

This proposal document describes a quick responding, cost protection system for an individual and especially for women using which a woman in distress can call for help just with the press of a button on this smart gadget. Self Defense System for women safety is like a Smart Watch for Women. It has the ability to help women with technologies that are embedded into a compact device.

The women wearing this device as a watch or band, in case of any harassment or when she finds that someone is going to harass, she presses a switch that is located on the watch or band or when the women has fallen the information about the attack along with the body posture and location information is sent as SMS alert to a few predefined emergency numbers And soon help is on its way! The system will consist of embedded

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Automatic Street Light Control System using LDR Sensor

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Abstract

This Paper aims at designing and executing the advanced development in embedded systems for energy saving of street lights with light depending resistor. Nowadays, human has become too busy and he is unable to find time even to switch the lights wherever not necessary. This can be seen more effectively in the case of street lights. The present system is like, the street lights will be switched on in the evening before the sun sets and they are switched off the next day morning after there is sufficient light on the roads. But the actual timings for these street lights to be switched on are when there is absolute darkness. With this, the power be wasted up to some extent. This Paper gives the best solution for electrical power wastage. Also, the manual operation of the lighting system is completely eliminated. In our Paper we are using LDR, which varies according to the amount of light falling on its surface, this give an indication for us whether it is a day/night time. In the present Paper street lights are taken into consideration where the above discussed factors are rectified in them. This is achieved with the help of an embedded system. By using this as the basic principle we can design centralized intelligent system for the perfect usage of streetlights in any place can be developed.

Keywords: *LM358, LM324, LDR. GPS*

Introduction

Many people have a phobia of darkness, so to assist them in such situations, we have explained a simple circuit that will automatically turn on the street light consisting of LEDs or

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Challenges and Possible Solutions for Emerging Trends in Technologies

IOT based Smart Safety Helmet for Motorcyclist for avoiding Head injuries

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Abstract

Smart Helmet - Intelligent Safety Helmet for Motorcyclist is a Paper undertaken to increase the rate of road safety among motorcyclists. The idea is obtained after knowing that there is increased number of fatal road accidents over the years. Through the study identified, it is analysed that the helmets used is not in safety features such as not wearing a helmet string and not use the appropriate size. Therefore, this Paper is designed to introduce safety systems for the motorcyclist to wear the helmet properly. With the use of Image processing unit using Raspberry Pi and OpenCV , the motorcycle can move if there is helmet pound wearing, in accordance with the Paper title Smart Helmet - Intelligent Safety for Motorcyclist using Raspberry Pi and Open Cv. Safety system applied in this Paper meet the characteristics of a perfect rider and the application should be highlighted. The Paper is expected to improve safety and reduce accidents, especially fatal to the motorcyclist.

Keywords: IOT, KNN, Raspberry Pi and OpenCV.

Introduction

Two-wheelers, the mode of transport most Indians use, continue to be the most vulnerable to accidents. Indian roads were at their deadliest in 2014 claiming more than 16 lives every hour on average. Over 1. 41 lakh people died in crashes, 3% more than the number of fatalities in 2013. Accidents involving two-wheelers and accounted for nearly half of the lives lost in road crashes. While 13, 787 two-wheeler drivers

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CHAPTER - 06

VoWiFi Cell Capacity IEEE 802.11ax for VBR Traffic using IoT

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ABSTRACT

Apart from mobile cellular networks, IEEE 802.11based wireless local area networks (WLANs) represent the most widely deployed wireless networking technology. With the migration of critical applications onto data networks, and the emergence of multimedia applications such as digital audio/video and multimedia games, the success of IEEE 802.11 depends critically on its ability to provide quality of service (QoS). A lot of research has focused on equipping IEEE 802.11 WLANs with features to support QoS. In this survey, we provide an overview of these techniques. We discuss the QoS features incorporated by the IEEE 802.11 standard at both physical (PHY) and media access control (MAC) layers, as well as other higher-layer proposals. We also focus on how the new architectural developments of softwaredefined networking (SDN) and cloud networking can be used to facilitate QoS provisioning in IEEE 802.11-based networks. We conclude this paper by identifying some open research issues for future consideration.

Key: *VoWiFi, Cell, Capacity, IEEE 802.11,ax VBR, Traffic, IoT, media access control.*

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