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<th>Volume-8 Issue-5S, May 2019, ISSN: 2278-3075 (Online)</th>
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<td>Published By: Blue Eyes Intelligence Engineering &amp; Sciences Publication</td>
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### Authors

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<th>M Sandeep, Lavanya Shivgonda, Rajeswari M, Kaushik S, Nikhil Tengli</th>
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### Paper Title

**Robotic ARM using Computer Vision**

### Abstract

A Bot which pursues Human hand developments. Its unlimited authority lies with the client and doesn't have any knowledge of its own. Programmed robots having man-made brainpower are a danger to society and may cause hurt in certain situations. Subsequently, having full oversight over the robot is a protected method to work with such robots. In this paper, we have proposed a comparable arrangement of a robot, catching pictures from the PC web cam progressively condition and procedure them as we are required. By utilizing open source Computer vision library (OpenCV for short), a picture can be caught on the basis of its Hue saturation value (HSV) extend. The fundamental library capacities for picture dealing with and handling are utilized. Fundamental library capacities are utilized for stacking a picture, making windows to hold picture at run time, sparing pictures, and to separate pictures dependent on their shading values. I have additionally connected capacity to edge the yield picture so as to diminish the twisting in it. While handling, the pictures are changed over from their essential plain Red, Green, and Blue (RGB) to an increasingly reasonable one that is HSV.

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5. Mamata s.kalas "Real time face detection and tracking using opencv" Department of IT, KIT’S College of Engg., Kolhapur 2014

### Authors

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<th>Akash Srivastava, Annu Malik, Alisha Bhatt, Aprajita Kumari, Prof. Manju More E</th>
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### Paper Title

**Placemnto – An Android based Project for the Automation of Placement and Training Department**

### Abstract

Training and Placement department is one of the important area to any educational Institute, even in this era, we are doing most of the work by using human interventions. The main aim of this paper is to automate the Training and Placement cell of Reva University. The main feature of this project is the generation, verification, authentication and easy analysis with maintenance of relevant data. This is achieved by means of modern Technology like Android and database servers. This will provide the facility to maintaining student data along with placement records of the college. This will serve as a medium of free communication and feedback between the students and the placement department. The Planner in the application will help all the users to select what they want to study and, plan their day accordingly. All the syllabus and faculties will be one touch away from the users. Users can post their queries and can be in direct touch with the Training and placement cell. The project aims to provide maximum optimization and security along with minimal manual work. This will be helpful in efficient and better management of all placement and Training activities on campus. With the development of this project, the University can maintain computerized records without redundant entries.

### Keyword

The university can maintain computerized records without redundant entries.

### References

3. Prof. Seema Shah Assistant Professor, Mr Nilesh Rathod, “Design Paper on Online Training and Placement System (OTaP)”.

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1. - 5

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**Abstract:** Mobile Ad-hoc network is a self configuring wireless network. It does not have any fixed infrastructure. Mobile node can leave and join the network. Therefore network topology changes any time. In Manet hosts can work as a router and forwards data from initiator to receiver. Since wireless channel is shared and topology is dynamic, providing quality of service (QoS) is a challenging task. QoS routing can find optimal routes that supports QoS requirement based on the received information during route discovery process. If QoS requirement cannot be supported, the admission control mechanism reject incoming request. Bandwidth estimation is a technique to determine available data rate on a route in the network. The term bandwidth means data rate not the physical bandwidth in hertz. QoS routing is required because most of the real time applications require QoS routing because most of the real time applications require QoS routing.

**Keyword:** QoS Routing, Active Technique, Passive Technique, Bandwidth Estimation, Admission control, Manet.
Paper Title: Smart Blind Stick using Artificial Intelligence

Abstract: Smart Blind Stick is a device designed to help guide the visually impaired by detecting objects and portray the information to them in the form of speech. This reduces the human effort and gives better understanding of the surrounding. Furthermore it also provides an opportunity for visually impaired people to move from one place to another without being assisted by others. The device can also be used in old age homes where old age people have difficulty in their day to day activities due to decreased vision. With this paper, the aim to aid people in need to “see” the surroundings. Since the field of artificial intelligence is doing great progress now and features like object detection is getting easier and computationally feasible, these features are implemented in the paper. The paper focuses on object detection and classification on pictures which are captured by the device mounted on a stick whose information can then be relayed to the user in means of sound or speech.

Keyword: Object detection, YOLO, Tensorflow, eSpeak, Raspberry pi, Blind, Visually impaired.

References:
Abstract: Image steganography has major role in enhancing the confidentiality of sensitive information related to business information, research data, and health record data and so on. Here the sensitive data considered is Medical data. When the medical image is transmitted through in secure public network, there are chances for medical images to be tampered. To avoid intruders in viewing the sensitive data i.e. Medical information the need of hiding it becomes the foremost criteria. This project mainly aims at enhancing medical integrity. To achieve medical integrity, it is required to hide the medical information within a cover image which is the medical image here. The proposed system aims at providing high security of data integrity by using cryptography along with steganography. The method of digital steganography is involved in the transfer of high imperceptible method that enhances the hiding of Electronic patients record (EPR) into medical images without major modification in the data transfer. It is predominantly required to protect and enhance the security methods ensures that the eavesdroppers will not have any suspicion that medical image or sensitive medical data is hidden in that image.

Keyword: Digital steganography, Electronic Patients Record (EPR), edge-detection, XOR, Medical Data

References:
2. Kumar Gaurav, Umesh Ghanekar, “Image Steganography algorithm based on Edge-region detection and Hybrid Coding”, 2018

Abstract: In this modern time, identifying a person using a face is a standard biometric approach to distinguishing an individual from others. So techniques are required to identify a face must be quick and sufficiently enough to work in real time. But there are many difficulties within the execution of face identification in low lighting condition. In this paper, we have proposed a system that is using Local Binary Patterns Histogram algorithm for identifying a face. It can recognize both front and side faces and upgrade the value of poor enlightened picture and also expands the recognition rate in real time.

Keyword: Face recognition, LBPH, Histograms, Identification Process

References:
7. Prevention of Theft of Sandalwood trees using IOT and Arduino

Abstract: With the advancement in the technology and increasing dependency of humans on smart devices, with the rising concern for security systems available to the society in day to day life, it has become very important to have a technology which can monitor and protect the green cover in our society using IOT. Our paper ‘Prevention of Theft of Sandalwood trees using IOT and Arduino’ deals with embedded technologies which incorporates the inbuilt structure and script code for Arduino in this paper we present an efficient solution to safeguard sandalwood trees which are the pride of our society. The sensors used here are connected with Arduino. The safety statistics of sandalwood trees is continuously synced with cloud storage using the wireless module which can be monitored easily by the concerned forest official who can also enable and disable the sensors. The accelerometer depends on the vibrations to control the signals. Our proposed system will link the leading technology to bring the features of security to completely safeguard our precious Sandalwood trees present in our environment.

Keyword: Arduino, vibrational sensors (embedded accelerometer), microwave transmission, Internet of Things (IOT), Global positioning System (GPS).

References:
2. Nawrath, Martin "Arduino Frequency Counter Library" Laboratory for Experimental Computer Science at the Academy of Media Arts Cologne Germany.
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<th>Authors</th>
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| Tejas Rao C, Mohammed Zainuddin, Shrishail M Patil, Shashank G, Nimrita Koul | Real Time Person Detection and Classification using YOLO | A Convolutional Neural Network (CNN) is a class of deep neural network most commonly used in analyzing visual images. Various systems and applications have been built to detect and classify the objects in a faster way taking CNN as its foundation. In this paper, we introduce a model to identify and classify people wearing ID card. Our model uses an object detection system called YOLO (You Only Look Once) for detecting and classifying objects in real-time videos. In the YOLO algorithm, a single convolutional network predicts the bounding boxes and the class probabilities for these boxes. We aim to use our model for authentication, surveillance and security purposes at organizations, corporations and educational institutions to detect an unauthorized person at the premises or somebody without a valid identification document. Using the object detection and classification, we aim to build a model which would alert the respective authorities on the matter. | 1. S. Divvala, R. Girshick, A. Farhadi, J. Redmon, "You Only Look Once: Unified, Real-Time Object Detection," in The IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016.  

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<th>Authors</th>
<th>Paper Title</th>
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<tr>
<td>Arun Kumar E, Gourish M Malage, Sunilkumar S Manvi, Kiran Kumari Patil</td>
<td>Development of Image Annotation Tool by using Region Grow Algorithm</td>
<td>Development of Image Annotation Tool by using Region Grow Algorithm. This paper presents a novel method for automatically generating image annotations using a region-grow algorithm. The method is evaluated on a large dataset of images and achieves promising results.</td>
<td>36-39</td>
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8. **Keyword:** Convolutional Neural Network, Object Detection and Classification, You Only Look Once (YOLO).
propose a region grow algorithmic program for development of image annotation tool. This method uses low-level model options and a straight forward collection of the distances to find out closest homogenized pixels of a given picture and mix one another to make a region of image.

**Keyword:** Image annotation, Region grow Algorithm.

**References:**


12. Lei Ye, Philip Ogumbona and Jianqiang Wang, "Image Content Annotation Based on Visual Features” Proceedings of the Eighth IEEE International Symposium on Multimedia (ISM'06).


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<th>Authors</th>
<th>Paper Title</th>
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<tr>
<td>Savita Choudhary, Vipul Gaurav, Abhijeet Singh, Sumit Agarwal</td>
<td>Autonomous Crop Irrigation System using Artificial Intelligence</td>
<td>Abstract: Agriculture plays a significant role in the economy and its contribution is based on measurable crop yield which is highly dependent upon irrigation. In a country like India, where agriculture is largely based on the unorganized sector, irrigation techniques and patterns followed are inefficient and often lead to unnecessary wastage of water. This calls for the need of a system which can provide an efficient and deployable solution. In this paper, we provide an Automatic Irrigation System based on Artificial Intelligence and Internet of Things, which can autonomously irrigate fields using soil moisture data. The system is based on prediction algorithms which make use of historic weather data to identify and predict rainfall patterns and climate changes; thereby creating an intelligent system which irrigates the crop fields selectively only when required as per the weather and real-time soil moisture conditions. The system has been tested in a controlled environment with an 80 percent accuracy, thus providing an efficient solution to the problem.</td>
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**Keyword:** artificial intelligence, irrigation, internet of things, prediction algorithms, machine learning, and water conservation

**References:**

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13. Pradeep Singh, “3.3 V Step Down Power Supply for ESP8266”, Article by IOT Bytes
17. Fethi Ouallouche, “Improvement of Rainfall Estimation from MSG data using Random Forests Classification and Regression ”, Atmospheric Research, 211, May 2018

Authors: Arvind Malge, Hardikkumar M. Dhaduk, Mallikarjuna Shastry P.M

Paper Title: An approach to face Detection and Recognition using Viola Jones

Abstract: The face of human may be a muddled visual dimension model and is therefore extremely difficult to create a computing model for the cognitive basic process. The paper displays a system for perceiving the human face smitten by image-based highlights. The technique proposed is available in 2 phases. In an image using Viola-Jones calculation, the main preparation distinguishes the human face. Using a combination of Principle Component Analysis and Artificial Neural Network, the distinguished face within the image is perceived at the next stage contrasting the execution of the proposed strategy with existing ways. The proposed strategy recognizes greater accuracy in the acknowledgement.

Keyword: Face Recognition, Viola-Jones algorithm, PCA, AAN

References:
9. Dhirender Sharma and JoydipDhar, “Face Recognition using Modular Neural Networks”, IEEE International Conference on
**Abstract:** Real time face recognition technology has become a prominent tool for addressing solutions to many complex problems. Such as identification and the verification of identity. Face recognition technology also addresses the time consumption issue that arises in other biometric systems. Taking Attendances manually is always a monotonous job and it additionally consumes heap of our time. The prevailing biometric attendences wastes a great deal of our time and these systems can be cheated easily. In our proposed system the attendance is recorded by using a camera that is attached in front of classroom which is continuously recording but the system will never store any recorded files. And the features obtained from the detected images are compared with the features stored in the database and the system mark’s the attendance. This paper aims at automating the whole process and implementing a system that can’t be cheated. The entire system is built by using a machine learning tool called DLIB.

**Keyword:** DLIB, Biometric, Attendance, Face Recognition

**References:**

3. Low-complexity HOG for efficient video saliency Teayung Lee ; Myung Hwangbo ; Tanfer Alan ; Omesh Tickoo ; Ravishankar Iyer2015 IEEE International Conference on Image Processing (ICIP) Year: 2015. Pages: 3749 - 3752.
11. https://en.wikipedia.org/wiki/File:Typical_cnn.png This file is licensed under the Creative Commons Attribution-Share Alike 4.0 International license.

**Authors:** Chaitanya Krishna VB, Bhaskar Reddy PV, Chethan Kumar A, Salman Ahmed, Sampath M

**Paper Title:** Face Recognition Based Attendance Management System using DLIB

**Authors:** Ajith Shenoy, Sushma Ravindra Y, Akash Sharma, Akshay Rajan, Akshay GV

**Paper Title:** NLP Models Behind RASA Stack
promotes to contribute in developing the platform for better efficiency of the platform to function.

**Keyword:** Bag of words, Chatbot, CRFs, NLP, Rasa stack

**References:**
1. Wenpeng Yin, Katharina Kann, Mo Yu, Hinrich Schütze, "Comparative Study of CNN and RNN for Natural Language Processing\textsc{arXiv:1702.01923}, 7 Feb 2017
5. More than Bag-of-Words: Sentence-based Document Representation for Sentiment Analysis 2013 Georgios Paltoglou Faculty of Science and TechnologyUniversity of Wolverhampton & Mike Thelwall Faculty of Science and Technology University of Wolverhampton

**Authors:** Hrithik Yadav, Irunna G.G, J Nimeshkal, Kiran Kumar B, Archana.B

**Paper Title:** Smart Traffic Light

**Abstract:** With increase in population, there has been a significant rise in the number of vehicles on our roads. This marked increase in vehicles has resulted in most urban areas being gridlocked in traffic jams. In order to reduce this congestion and set up a functional system of traffic management, we have proposed the Smart Traffic Light (STL), which uses image processing and a scheduling algorithm to automatically manage the duration of traffic signals. Another feature of the STL is its management of signals to prioritise emergency vehicles such as ambulances or fire engines by ensuring green signals in their specified routes in order to ensure minimum delay in traffic.

**Keyword:** we have proposed the Smart Traffic Light (STL),

**References:**
3. Smart Traffic Light Control System” by Bilal Ghazal, Khaled ElKhatib, Khaled Chahine, Mohand Kherfan at the “Third International Conference on Electrical, Electronics, Computer Engineering and their Applications (EECEA)” in April 2016 10.1109/EECEA.2016.7470780
6. SMART TRAFFIC CONTROL SYSTEM FOR AMBULANCE” Article · September 2016

**Authors:** A.Aravind, Aditya Agarwal, Ayush Jaiswal, Ayush Panjiyara, Mallikarjun Shastry P M
Paper Title: Fatigue Detection System Based on Eye Blinks of Drivers

Abstract: In recent years, road accidents have increased significantly. One of the major reasons for the accidents as reported is driver fatigue. Therefore, there is a need for a system to measure the fatigue level of the driver and alert the driver when he/she feels drowsy to avoid accidents. So, in this paper we propose a system which comprises of a camera installed in the car dashboard. It will continuously monitor the blink pattern of driver and detect whether he is feeling drowsy or not. If the system finds the driver is feeling drowsy then an alert will be generated to avoid accident. This project attempts to contribute towards the exercise of analyzing driver behavior-based Eye Aspect Ratio (EAR) in order to reduce preventable road accidents.

Keyword: Blink pattern, Camera, Car dashboard, Driver fatigue, Drowsy, Eye Aspect Ratio (EAR)

References:
2. “Predicting driver drowsiness using vehicle measures: Recent insights and future challenges” is a paper presented by Charles C Liu, Simon G.Hosking, Michael G.Lenné
3. Awais M, Badruddin N, Drieberg M “A Hybrid Approach to Detect Driver Drowsiness Utilizing Physiological Signals to Improve System Performance and Wearability”

Authors: Shiva kumar.R.Naik, Kshitij Yadav, Hariom Yadav, Niha.C.Gowda, Mounika

Paper Title: Data Recovery from Encrypted Image and Recovering Image

Abstract: This paper refers to the data hiding technique in an encrypted image and restoring image as it was before to its fullest. There are three bids of the framework to this process, which are a content owner, data hiding and recipient. The content owner encrypts the image with ciphertext making it an encrypted image. Data hidder channelizes encrypted image into 3 different channels and adds each with additional bits in order to obtain marked encrypted image. At the recipient end, the noise from the image could be removed consuming the extraction key and the image obtained will be intact as original. Utilizing RDH EI method, we not only receive secret information but also, the image is recovered using progressive recovery.

Keyword: Data hiding, Information hiding, encrypting images, recovering encrypted image

References:
1. X. Hu, W. Zhang, X. Li, and N. Yu, Optimized Histograms Modification for Reversible Data Hiding, IEEE,2014
8. J. Zhou, W. Sun, L. Dong, et al. Secure reversible picture information stowing away over scrambled area by means of key
### 17. Wide Area Disaster Management System using Mobile Intranet

**Authors:** K Anitha, Tejus Khadri, Tejas Prurvimuth, Venkatesh T.D, Yash Nesarikar

**Paper Title:** Wide Area Disaster Management System using Mobile Intranet

**Abstract:** On the occasion of a large-scale disaster, sharing of information functionality with everyone is important. However, there were many cases where information sharing was not actually well functioned because the disaster information network infrastructure did not consider the system failure when the disaster happened. In our findings, we focus on the fact that the disaster management systems are operated on each local area. The system redundancy is realized by sharing the system resources and integrating the disaster information into a large disaster system while decentralizing the system and network loads. And, the system failure can be recovered by introducing system failure detection function for server failure and link disconnection and dynamically reconstructing the network system. In order to verify the effectiveness of the suggested method, we constructed a nationwide, disaster information network prototype system over Japan Gigabit Network (JGN2), implemented Wide-area Disaster Information sharing system (WIDIS) and evaluated its functionality and performance.

**Keyword:** Japan Gigabit Network (JGN2), Wide-area Disaster Information Sharing system (WIDIS).

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7. Disaster information system and its wireless recovery protocol Noriki Uchida, Hideaki Asahi, Yoshitaka ShibataPublished in International Symposium on Applications and the International Symposium on Applications and the Internet Workshops. 2004 DOI:10.1109/SAINTW.2004.1268592
8. Paper on Proposed System for Placing Free Call over Wi-Fi Network Using Voip and SIP Bhushan R. Jichkar

### 18. Classification of Mammograms using Attention Learning for Localization of Malignancy

**Authors:** Manaswini Nagaraj, Vignesh Prabhabakar, Sailaja Thota

**Paper Title:** Classification of Mammograms using Attention Learning for Localization of Malignancy

**Abstract:** Mammography is a specialized medical imaging that uses a low-dose x-ray system to examine the breasts. A mammogram is a mammography exam report that helps in the detection and diagnosis of breast diseases in women at an early stage. This project proposes to classify mammography breast scans into their respective classes and uses attention learning to localize the specific pixels of malignancy using a heat map overlay. The attention learning model is a standard encoder-decoder circuit wherein convolutional neural networks perform the encoding and recurrent neural networks perform the decoding. Convolutional neural networks enable feature extraction from the mammography scans which is thereafter fed into a recurrent neural network that focuses on the region of malignancy based on the weights assigned to the extracted features over a series of iterations during which the weights are continuously adjusted owing to the feedback received from the previous iteration or epoch. Mammography images are equalized, enhanced and augmented before extracting the features and assigning weights to them as a part of the data preprocessing procedures. This procedure would essentially help in tumor localization in case of breast cancers.

**Keyword:** Attention learning, Convolutional neural networks, Encoder-Decoder, Recurrent neural networks.

**References:**


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Authors: P.S.R.V Aditya, P Dinesh Sai, Purvaja Varati, R Rohan Singh, Ranjitha U.N
Paper Title: Emotion Recognition using OpenCV

Abstract: The human face plays a pivotal role in identifying emotions, regardless of subject-independent features. For human-computer interaction, facial expressions form a platform for non-verbal communication. In this regard, a system which detects and analyses facial expressions, needs to be robust enough to account for human faces having multiple variability such as color, orientation, posture and so on. Our paper focuses on the technicalities which makes the system capable of addressing the variability associated with facial expressions. This is achieved using concepts of machine learning, deep learning and artificial intelligence. The focus extends to making human-machine interaction not only an interactive process, but also a user friendly one. The implementation makes use of a Haar Cascade Classifier, Tensorflow and openCv.

Keyword: Facial Expressions, Haar Cascade Classifier, machine learning, non-verbal communication, OpenCV, Tensorflow

References:

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Authors: Guna Shekar B, Darshan C, Ganesh Horamata B V, Basavaraddi Mulimani, Sarvamangala D R
Paper Title: BMTC e-pass Application

Abstract: Bengaluru Metropolitan Transport Corporation (BMTC) is a prominent public transport service provider in
Bengaluru. It makes commuting favourable and cheap compared to other modes of transport within the city. The organization enhances its services by analyzing passenger demands and providing them the necessary services. BMTC working model is coagulating with information technology in terms of ITS (Intelligent Transport System- Global Positioning System [GPS] enabled buses, electronic ticketing machine [ETM]). In spite of these advancements, it charges its service fares through paper tickets and passes which need to be purchased by paying cash. In the Digital era, technological solutions pave the way for digitizing mechanisms for traditional methods or problems and synchronizing information in real-time. These paper pass which proves to be beneficiary for passengers are being misused by means of transferring, reusing the day pass when there is lack of inspection. We have designed a solution to overcome misuse and also to encourage digital transaction for a cashless economy. The solution is mobile application electronic pass (e-pass).

**Keyword:** Android Mobile Application, BMTC, e-pass, QR code, digital payment.

**References:**

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2. Sanam Kazi, Murutza Bagasrawala, Farleen Shaftik, Anamta Sayed “Smart E-Ticketing System for Public Transport Bus”
4. “Taking an Electronic Ticketing System to the Cloud: Design and Discussion”. Filipe Arajuo, Marilia Curado, Pedro Furtado, Raul Barbosa CISUC, Dept. of Informatics Engineering, University of Coimbra, Portugal filipius@uc.pt, Marilia, pdf, rbarbosa@dei.uc.pt 2013.

**Authors:** Esha Kashyap, S.R.Kannan, Mark Last

**Paper Title:** Effect of Kernel Learning in Unsupervised Learning for Clustering High Dimensional Databases

**Abstract:** This paper reviews the effectiveness of kernel learning in unsupervised data analysis using clustering. Clustering analysis is an explorative data analysis tool that assists in discovering hidden patterns or natural grouping and has many effective applications in various disciplines. The unison of kernel learning with the objective of unsupervised clustering algorithms facilitates in recognizing non linear structures in high dimensional data containing outliers with heavy noise. The recent kernel clustering methods considered in this paper are the kernelized versions of K-Means, Fuzzy C-Means, Possibilistic C-Means and Intuitionistic Fuzzy C-Means. Computational complexities in kernel based clustering algorithms are quiet prominent and our objective is to understand the performance gains while using kernels in clustering. Experimental studies of this paper substantiate that kernel based clustering algorithms yields significant improvements over their traditional counterparts.

**Keyword:** Unsupervised clustering, Data Analysis, Kernel learning, Partition clustering.
Crime Detection in Surveillance Videos

During the most recent couple of decades, surveillance cameras have been introduced in numerous areas. Examination of the data caught utilizing these cameras can assume powerful jobs in web based observing different occasion expectation and objective driven applications including inconsistencies and interruption identification. Wrongdoing has raised in our everyday lives, observation recordings are utilized to catch an assortment of true irregularities. Observing consequently a wide basic open zone is a test to be tended to. We can abuse ongoing PC vision calculations so as to supplant human work. The video observation framework is two-dimensional spatial data over a third measurement, that recognizes and predicts strange practices expecting to accomplish a shrewd reconnaissance idea. In this paper, we audit various methodologies used to learn inconsistencies by abusing both ordinary and atypical recordings. To abstain from clarifying the peculiar

References:

Authors: Ashok Kumar J M, Arun Kumar C, Abishek B R, Thirumagal E
fragments or clasps in preparing recordings, which is very tedious, the learning calculation adapts irregularity through the different examples of positioning structures by utilizing the feebly marked preparing recordings.

**Keyword:** anomaly detection, surveillance systems, computer vision, feature extraction, object detection, object tracking, C3D, CNN, deep learning.

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22. Andrej Karpathy, George Toderici, Sanketh Shetty, Thomas Leung, Rahul Sukthankar, Li Fei-Fei, “Large-Scale Video Classification with Convolutional Neural Networks", IEEE Conference on Computer Vision and Pattern Recognition(CVPR), 2014.
Abstract: — The changes in environment and climate lead to various diseases in plants. These diseases are sometimes difficult to identify without the right knowledge and expertise. The farmers and other plantation growers do not possess the expertise and resources to correctly identify the diseases of plants and their remedies. To handle this problem machine learning technology can be used, which can correctly identity the disease of the plants and display the remedies to the end user. Any new emerging disease can be added by proper botanist and their associations for the awareness of farmers. The machine learning system learns about the plant diseases from large datasets and gets trained to correctly identify new test cases given as an input by the farmers through the camera of their smart phones. Here we propose the methodology uses tensorflow incorporated with android application which can suggest the user about the disease.

Keyword: Android Application, Machine Learning, Prediction, Plant Diseases, TensorFlow, Image Dataset, Farmer

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31. V Pooja ; Rahul Das; V Kanchana, “Identification of plant leaf diseases using image processing techniques”, 2017 IEEE Technological Innovations in ICT for Agriculture and Rural Development (TIAR), April 2018
34. Rutu Gandhi ; Shubham Nimbalkar ; Nandita Yelamanchili ; Surabhi Ponkshe, “Plant disease detection using CNNs and GANs as an augmentative approach”, IEEE International Conference on Innovative Research and Development (ICIRD), 2018
35. Bhavini J. Samajpait ; Sheshang D. Degadwala, “Hybrid approach for apple fruit diseases detection and classification using random forest classifier”, International Conference on Communication and Signal Processing (ICCSP), 2019

Authors: Sowmya Sundari L K, Harshitha Rayapuram, Keerthana M, Kusuma Rathna M, Shalini A
Paper Title: Machine Learning Based Leaf Disease Detection

Abstract: India is mainly known for land of agriculture. Majority of the population depends on agriculture. Farmers are unaware to find the disease of the crops which may affect their livelihood. This is one of the major problems where the farmers are facing. To overcome this problem, a device which detects the disease of the leaf using Image processing and machine learning. With the help of image processing, the affected leaf pictures are taken as reference detects the disease of the leaf. Mean Shift algorithm and SVM classifier are used for segmentation and in classification of the disease. This application is used for farmers in identifying the disease of the leaf.

Keyword: SVM, India is mainly known for land of agriculture

References:
13. LWG [Bavarian State Institute for Viticulture and Horticulture], Field trials on peach and nectarine trees regarding peach leaf curl

Authors: Manjunath P C, Dhanush.S, G.Uday Teja, G.Srinidhi, N.Madhu Babu

Paper Title: Automatic Noise Detection and Reduction in Images

Abstract: Data classification in presence of noise will cause a lot of worse results than expected for pure patterns. In the proposed work we tend to investigate the drawback within the case of deep convolutional neural networks so as to propose solutions which will mitigate influence of noise. The main contributions presented in this proposed work include using convolution neural network as an image classifier for detecting noise in the images and using different opencv2 inbuilt methods to mitigate noise in the images. Though a number of techniques are introduced for this purpose, using neural networks we can achieve a greater accuracy.


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Authors: Dipu Saha, Farooque Azam, Bipin Kumar, Faizan Abedin, Daryl Jose

Paper Title: IoT Based Smart Card Pollution and Traffic Control System

Abstract: In today's world, the urban mobility is one of the major problems, especially in metropolitan cities. Improvisation is required in existing traffic management systems in order to manage it efficiently. One of the
primary complications among Indian cities are that the existing infrastructure cannot be expanded more. Poor and fragmented mobility has been considered a key contributor to Congested Traffic. Widening of Roads, making Flyovers, increasing public buses are not the only Solution for these challenges. Hence, we propose a smart card (RFID) based pollution and traffic control system, which has been implemented using Arduino Uno R3 along with RFID module interfaced with standalone application built over JAVA platform.

Keyword: Traffic management system, congested traffic, RFID, Arduino Uno R3, JAVA.

References:

Authors: Kishen. V, M. S. Sathvik Murthy, Mithilesh Kumar, Nimrita Koul

Paper Title: Intelligent Traffic Management System

Abstract: The importance of traffic signals is increasing owing to the drastic increase in population. Ensuring road safety is of high priority. In this project, we introduce an Intelligent Traffic Management System (ITMS) capable of managing traffic of varying densities, without the need of a traffic warden to physically monitor a particular intersection. This system is designed to retrieve the live traffic feed from a junction and process the same using the TensorFlow Object Detection API over OpenCV to detect the severity of the traffic based on the number of vehicles detected. Upon determining the number of vehicles, the corresponding signal, based on the traffic intensity is given. (More vehicles detected – Green light for longer duration and vice versa.) Thus, this system dynamically adapts to the prevailing traffic conditions and grants the corresponding traffic light sequence for the required duration to maximize the flow of vehicular traffic. The system is designed to ensure smooth traffic flow by decreasing the wait period of vehicles at intersections and automates the process of controlling traffic signal.


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Authors: Malathi Kulkarni, Vishwanath.R.Hulpalled

Paper Title: News Rank: Ranking News Topics based on Social Media Factors
Abstract: All media sources, particularly the news media, have educated the everyday news. These days, internet-based media, like Twitter, gives us an immense amount of information that is created by clients, which potentially contains news-related information. These sources to be helpful should remove undesirable information and concentrate just the information which is like the news media. Indeed, even though the unwanted information still exists, which is vital to give need to its usage. For this prioritization, information must be positioned utilizing three components. First, Media Focus (MF) of the Topic which principally centers around both internet-based life and news media. Next, User Attention (UA) which depends on clients’ interests and User Interaction (UI), which is on how the client responds to that specific topic. This is an unsupervised framework NewsRank---which find the news topics which is applicable in both news media and internet-based life and after that ranking the news topics utilizing degree of three elements.

Keyword: Media focus, Prioritization, Unsupervised, User Attention, User Interaction

References:

Authors: Nimrita Koul, Sunil kumar S Manvi

Paper Title: Inference of Gene Regulatory Networks for Prostate Cancer using Bayesian Networks with Feedback and Feed Forward Loops

Abstract: The solution to any problem depends on the depth of our understanding of it. Cancer is a disease that is being investigated at multiple levels and from multiple perspectives to understand the details of its origins and expansions in order to be able to figure a cure for it. We can now computationally analyze the biological data produced by genome analysis techniques like genomics, proteomics, and transcriptomics. DNA microarray technology has made available large gene expression datasets for entire genomes. It has been clinically observed that inside a human cell, activity of a gene often turns on or turns off one or more other genes. Such relationships
in the co-regulation of genes is captured by gene regulatory network models which are computationally constructed from gene expression datasets. It has been observed that healthy and diseased states of a human cell show different regulatory interrelations between genes. In this paper, we have proposed to use a stochastic approach called Bayesian Networks with Feedback and Feedforward loops for inference of inter dependence in the regulation of genes in case of Prostate Cancer. It was observed that 4 of the networks revealed by the proposed approach matched the ones observed in clinical studies.

**Keyword:** Bayesian Networks , Computational Genomics, Gene Expression Data, Gene Regulatory Network, Reverse Engineering

**References:**
Traffic Management using Convolution Neural Network

Traffic is one of the major problems in most of the metropolitan cities. Classifying the traffic conditions are important for determining traffic control strategies and management. Traffic congestions have negative impact on society, as a lot of time is wasted in it and controlling the congestions is necessary. By classification we can get to know which lane has traffic, from which we can further check the reasons for traffic and to take appropriate decisions to improve the performance. Video on traffic data is suitable source for traffic analysis. In this paper, video surveillance data is used for classification of road traffic using Convolution Neural Network. Convolution Neural Network requires minimal pre-processing when compared to other classification algorithms and is known for its accuracy. The video is classified based on rating of the traffic of its content. The model is completely trained it is tested with the testing set. This trained model is capable of processing the live streaming video and classifies each of the frames and gives the rating of the traffic for each lane, which can be helpful for traffic management.

Keyword: convolution neural network, traffic management

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1. Teresa Pamula. "Road Traffic Conditions Classification Based on Multilevel Filtering of Image Content Using Convolutional Neural Networks", IEEE Intelligent Transportation Systems Magazine 2018
8. "Road Traffic Conditions Classification Based on Multilevel Filtering of Image Content Using Convolutional Neural Networks" by Teresa Pamula IEEE Access 2018

Password Processing Scheme using Enhanced Visual Cryptography and OCR in Hybrid Cloud Environment

Password authentication is an important part of securing computer systems. To authenticate the user using the password can be achieved by simply converting the password into the values is called hash. Even though there are many websites which can unlock the hash values by using some cracking tools called as cyber attacks. This cyber attacks are very much common by the way of hacking the passwords by hackers. Hackers can undeniably figure out the plain text using such software's it gives n-number
of examples of plaintext samples which the hackers can execute and crack open or penetrate into personal information in the Hybrid Cloud Environment. To overcome this type of trouble or mishap our system is recommended. The proposal is that our system not only converts the plaintext into hash values but it will be stored as an image, the user will only have an ID and login password (at the time of user creation). The user when he wants to login he will receive an email in which a share-1 image will be present which is encrypted completely even he himself can’t be able to recognize what it is, the server will ask him to download the share-2 image then he has to enter his user ID for the server to recognize his User-ID. Since these images are encrypted both share images 1&2 are encrypted by VC (Visual Cryptography) then the user has to merge these two images, if it matches then only the user can login. This merge method undergoes OCR (Optical cryptography recognition). Our aim is to prevent hackers from gaining access to personal information of the users in Hybrid Cloud Computing Environment.

Keyword: Visual cryptography, Optical Character Recognition (OCR), Hybrid Cloud Computing

References:
18. Illyan Georgiev , Marcos Fajardo, Blue-noise dithered sampling, ACM SIGGRAPH 2016 Talks, July 24-28, 2016, Anaheim, California

Authors: Jayaprakash Nevara, Jyoti Mirji

Paper Title: Workspace Allocation and Management System with Realtime Feedback from IOT Sensors

Abstract: Office real estate space investments is one of the major capital expenditures done by any IT and ITES companies. This has a major impact on the profitability of the organizations as it adds to the capital expenditure incurred by them and also has environmental implications. As the companies grow they will be looking for more real estate space which will lead to putting more land into commercial usage for office space. Today, most of the companies allocate office space for employees statically on a 1:1 ratio i.e one cube per employee. But, given the fact that the modern workforce is mobile and at any given point of time not all the employees will be working from office for various reasons, making static allocation of office space and its usage inefficient and ineffective. So, there is a need for managing the available space efficiently and effectively. Organizations can look for saving real estate investments by increasing the user to cube ration by more than 1. This paper proposes a
A comprehensive system for workspace allocation and management with real-time feedback from IOT sensors at the office spaces.

**Keyword:** IoT, Workspace, Management, IT, ITES, Sensors

**References:**

**Authors:** Nischita N. J. Mylara Reddy C.

**Paper Title:** Efficient Conversational AI Agent to Improve Rural and Urban Healthcare

**Abstract:** Conversational AI agents are software programs which work exactly like humans, they interpret the users and accordingly react to the inputs given by them. These agents are built considering the medical interventions required to improve the overall health of the society. The AI agent designed acts intelligently during the process of the interaction between the humans and itself. It allows the user to use the interface by asking interactive questions then it processes them and responds relatively. Conversational agents are not only web-based but they can also be used on other platforms like mobile phones or any other mobile devices. Despite all these a user shall be satisfied if and only if the software is easy to use and obtains the exact results with all of the queries being answered. The main concern with this model is to use that ease to the user to interact with the agent thus solving the queries related to the symptoms suffered by the patients and hence predicting the disease at an early stage by maintaining the accuracy. There are around 100000 diseases in the world according to WHO. Most of their symptoms overlap as well hence by using this agent its possible for it to think insightfully and predict the early symptoms of the disease. In this paper we have designed a user interface and this interacts with the user to take the necessary inputs. This data is fed to the advanced Natural Language Understanding (NLU) to provide the personalized prediction based on the user interaction. The predictions done by the model uses the classification algorithms of Machine Learning. The accuracy of each of these algorithms varies. Therefore instead of considering only one algorithm and hoping it gives the best accuracy, we can use the Ensemble learning method to improve the overall prediction rate. This method gives better predictive indications as it combines many models results thereby improving the overall precision. Here we train our model using various algorithms and ensemble them to get the final results based on the technique of voting. This paper presents a front-end interface for common man using HTML and Angular JS, NLU for text pre-processing using Tensorflow method and ML model as a classifier, for the prediction which uses various machine learning algorithms like SVM, Decision Tree, Random forest etc and combines them all in a majority voting ensemble for balanced results. Therefore this model interacts with any patients be it from the rural or the urban and based on their symptoms predicts and ranks the most probable disease accurately and reliably.

**Keyword:** Conversational Agent, Artificial Intelligence, SVM, Decision Tree, Random Forest, Ensemble Learning, Tensorflow word embedding

**References:**
1. Haolin Wang and Qingpeng Zhang, Mary Ip and Joseph Tak Fai Lau, “Conversational Agents for Health Management and Interventions”, IEEE Computer Society, 2018
Automatic flower plucking systems for smart agriculture are being studied for many years to support flower harvesting. Such systems require flower recognition task to be integrated as part of the system. This paper presents an approach for classification of flowers using a machine learning algorithm. The method categorizes flowers into different species with the help of convolutional neural networks and deep learning techniques. The system uses a pre-trained CNN model to improve the accuracy rate. Concepts such as Feedforward, back-propagation and transfer learning are used to create the neural network model. Different hyper-parameter values have been tested on the model which provides maximum accuracy of 85.0 percentage on the testing dataset. The system uses a pre-trained CNN model to improve the accuracy rate. Concepts such as Feedforward, back-propagation and transfer learning are used to create the neural network model. Different hyper-parameter values have been tested on the model which provides maximum accuracy of 85.0 percentage on the testing dataset.

**Keyword:** Image Recognition, Machine learning, CNN, Feedforward.

**References:**


In this paper, a novel reversible keyless invisible authentication method for video piracy protection which uses randomized pixel for embedding real identity information is proposed. Randomization at two different levels is not considered in any of the existing methods. Videos, with this proposed embedding of authentication information, ensure minimum distortions and maximum resistance to the removal of authentication information. Keyless invisible embedding process increases the security and reduces the cost. This proposed approach enhances the randomization of the specific pixels where authentication information will be stored in a frame and the location of such modified pixels is stored in an immediate next frame. Each pair is identified with an embedded random number. Modified Least Significant Bit (LSB) based invisible watermark mechanism is used to embed the bits which are cost effective due to simplicity and which can withstand statistical attacks. During extraction, frame with pixel locations is used. The extracted information will be compared to assure the authenticity of video. The Euclidean distance, PSNR, MSE, SSIM proved that the proposed method can withstand visual attacks. StirMark test proved that the proposed algorithm is highly robust.

**Keyword:** Modified Least Significant Bit, Invisible Watermark, Video Authentication

**References:**

18. http://www.petitcolas.net/fabien/watermarking/stirmark\k

**Authors:** R. Sekhar, K. Thangavel.

**Paper Title:** Intrusion Detection System using Deep Neural Network and Regularization of Hyper Parameters with Adam Optimizer

**Abstract:** Intrusion Detection Systems (IDSs) study is unavoidable in the field of network security due to the present target oriented attacks for taking secret data of an organization. Classifying and detecting attacks are highly technical and tedious. In the existing models, the accuracy of intrusion detection in network traffic is different for different algorithms. This paper proposed a better intrusion detection system using Deep Neural Network with regularization of the hyper parameters. Adam optimization is proposed to optimize the weights in
The proposed system consists of six phases namely data collection, data framing, splitting of data for training and testing, pre-processing/encoding, regularization with Adam Optimizer, training and testing. It produces the better accuracy in detection process than the existing Deep Neural Network model. The benchmark data set NSL_KDD is collected and processed in the suggested system.

**Keyword:** Intrusion Detection Systems (IDSs), Deep Neural Network (DNN), Rectified Linear Unit (ReLU), Adaptive moment estimation (Adam) and Stochastic Gradient Decent (SGD).

**References:**
8. MajdLatah, LeventToker “Towards an Efficient Anomaly-Based Intrusion Detection for Software-Defined Networks: Publication in IET Networks,
held in the university. To improve these models and to avoid the models from overfitting to the training data, strategies like K-Fold cross-validation is applied for various values of k. The machine learning models selected are also compared for its efficiency by employing the supervised and unsupervised feature extraction techniques such as PCA and LDA. The Decision Tree model with K as 10 for cross-validation and PCA has outperformed all the other models producing the accuracy of 72.83% with satisfactory support and recall during experimentation. The application focuses on the targeted group of students, to eventually improve the probability of students getting placed during campus recruitment drives held in the university.

**Keyword:** The application focuses on the targeted group of students, to eventually improve the probability of students getting placed during campus recruitment drives held in the university.

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39. **Authors:** Likitha Daiphule, Bhaskar Reddy, Avinash Savith, Apoorva T V, Kavyashree
<table>
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<tr>
<th>Paper Title:</th>
<th>Tracking Suicidal Tendency using Twitter Data and Machine Learning Algorithms</th>
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| Abstract: | Social media analytics has a major part in a person’s life in this scenario. It is used to obtain the thoughts and opinion, sentiments of People. In this world people are comfortable sharing their thoughts and feelings effectively on social media rather than sharing their happiness or problems to their friends, parents or siblings’. Cerebral health indicators, with depression, Depression and nervousness leads to high risk of people obligating to suicide. Digital knowledge plays a major role to find suicidal tendency of people and to help them out. The study or research about finding the amount of people who have suicidal tendency or not was carried over by many universities where they collected the data from twitter or any health organizations. 
Twitter data is the most easily available data when compared to Facebook or any other social media site. These observations help us to determine the percentage of people having suicidal tendency or not by many processes which includes data preprocessing, data augmentation, testing and training, and final result representation. We use machine learning concepts. Sentiment Analysis or opinion mining is used.
There are many reasons for suicides across the world, using this digital or social data and with the help of machine learning we could also differentiate between the group of people who actually are depressed or people tweeting jokes, songs etc. |
| Keyword: | Bag Of Words, sentiment analysis, Natural Language Processing. |
| Authors: | Anil B, Akram Pasha, Aman, Aman Kumar Singh, Aditya Kumar Singh |

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<th>Paper Title:</th>
<th>Multiple Machine Learning Classifiers for Student’s Admission to University Prediction</th>
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<td>Abstract:</td>
<td>Data is the most important asset for any organization which is further processed to produce useful information. Machine Learning and Big Data techniques are widely used for industrial sectors to generate useful patterns helpful for earning more profits and expand businesses. From the past few years, a lot of research works have been done by using Big Data techniques on educational data for improvement in Education System. Machine Learning and Big Data can be useful for predicting the students’ admission, performance of teaching, performance of a student, identifying the group of students of similar behavior. However, the manual process of record checking is time consuming, tedious, and error prone; due to the inherent volume and complexity of data. In this study, the combination of linear and non-linear machine learning algorithms; Logistic Regression, Decision Tree, k-NN, and Naïve Bayes have been chosen to perform prediction of the target class for an unseen observation by polling. As the models built in this work are predicting the likelihood of a student taking up the admission into any university based on the student data collected by any marketing agency, the combined models are collectively called as the Admission Predictor. The administrative officials of any academic institution can use this kind of an application to explore and analyze the patterns that are affecting the student admission and come up with enhanced strategies to improve admission. Such an application not only plays a vital role in administration, but also help the management in reformulating the marketing criteria for overall</td>
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development of academic institution.

**Keyword:** Classification, Data Mining, Data Analytics, K-Fold Cross Validation, LDA, Machine Learning, PCA.

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3. Austin Waters and Risto Miikulainen, “GRADE, a statistical machine learning system developed to support the work of the graduate admissions committee at the University of Texas at Austin Department of Computer Science (UTCS).”
6. Elizabeth Murray, "Using Decision Trees to Understand Student Data”.
7. Surjeet Kumar Yadav, Saurabh pal, "Data Mining Application in Enrollment Management: A Case Study”, 5, March 2012.
10. Ahmad Slim, Don Hush, Tushar Ojah, Terry Babitt, "Predicting Student Enrollment Based On Student College “.
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**Authors:** Aditya Krishna K.V.S, Abhishek K, Allam Swaraj, Shantala Devi Patil, Gopala Krishna Shyam

**Paper Title:** Smart Traffic Analysis using Machine Learning

**Abstract:** Congestion is costly as well as annoying. India is the second largest road network in the world. Out of the total stretch of 5.4 million km of road network, almost 97,991 km is covered by national highways. The major cause leading to traffic congestion is the high number of vehicle which was caused by the population and the development of economy[1]. Typical urban residents spend more than ten hours a week driving of which (one to three hours) occurs in congested situation. In smart city roads would be equipped with the sensors for analyzing the traffic flow and also there are few traffic analysis / prediction methods use neural network and other prediction models which are not so efficient and suitable for many real world application [1]. So, here in this paper solution for traffic analysis using random forest algorithm is being proposed which would select only part of data for analyze like two third of entire data and predict the traffic congestion of specific path and notifying well in advance the vehicles intending to move to move on that specific path. Thus accurate traffic flow information help road users for fast and safe transporting.

**Keyword:** Machine Learning, Traffic analysis, Styling, Random Forest

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4. “Machine Learning an Introduction to mean square error and regression lines”, Moshe Binieli,Freecodecamp.com, Mean Square Error Image
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Authors: Bharath Darshan Balar, D S Kayya, Chandana M, Anush E, Vishwanath R Hulipalled

Paper Title: Efficient Face Recognition System for Identifying Lost People

Abstract: Every day which includes kids, teens, mentally challenged, old-aged people with Alzheimer's, etc. Most of them remain untraced. This paper proposes a system that would help the police and the public by accelerating the process of searching using face recognition. When a person goes missing, the people related to that person or the police can upload the picture of the person which will get stored in the database. When the public encounter a suspicious person, they can capture and upload the picture of that person into our portal. The face recognition model in our system will try to find a match in the database with the help of face encodings. It is performed by comparing the face encodings of the uploaded image to the face encodings of the images in the database. If a match is found, it will be notified to the police and the people related to that person along with the location of where the person is found. The face recognition model that we have used maintains an accuracy of 99.38% on the Labelled Faces in the Wild Benchmark which comprises of 13,000 images [1].

Keyword: Face Encodings, Face Recognition, Finding, Lost Kids, Missing People.

References:
7. Sumeet Pate, “Robust Face Recognition System for E-Crime Alert”, in International Journal for Research in Engineering Application and Management, Issue 1, MAR, 2016

Authors: D.N.Punith Kumar, Akram Pasha

Paper Title: Insights of Mathematics for Big Data

Abstract: Computer Science can be considered as one of the extensions made to the pure mathematical sciences that exhibit the design and development of many mathematical models to solve various engineering problems. Data storage and data processing are the two major operations that are primarily focused by any computational model while solving a problem. Mathematical modeling has been helped in producing the various computational models across several problems that are found in the field of computer science. Among many problems that are found in the area of computer science, data science and big data have recently geared up to solve many business oriented problems that are purely based on data analytics to enhance the profit by taking critical business decisions. Data Scientists and mathematicians are found to have a skeptical understanding or too little collaboration either in knowing the mathematical concepts behind big data technologies, or too little knowledge of applications of mathematical concepts in applications of big data, respectively. Therefore, in this paper, an effort is made to bring out the major mathematical concepts that have contributed in fueling the solutions for big data problems. The authors hypothesize that the work proposed in this paper would benefit any data scientist or a mathematician to clearly understand the bridge between the math and its application in big data analytics. The authors identify the mathematical concepts and their roles played while solving various tasks that are encountered in the domains of big data. Further, such an endeavor is expected to open up many opportunities for both mathematicians and big data professionals to work collaboratively, while encouraging and
contributing in enhancing interdisciplinary research across many domains of engineering.

**Keyword:** Big Data, Data Analytics, PCA, SVD, Laplacian Graph, Eigen values, Eigen Vectors, Linear Algebra.

**References:**
27. Murakami, Daisuke, and Daniel A. Griffith. ”Eigenvector spatial filtering for large data sets: fixed and random effects approach.”
Abstract: In the present era, Computer Aided Diagnosis (CAD) is very useful for the detection of a liver tumor. This type of study and categorization system can moderate an unnecessary biopsy. The proposed method for the detection of liver cancer clusters in liver images using Gabor features and shape features. The mentioned regions are categorized by the SVM classifier utilizing the most prevailing features selected from the above features. In our project, we have proposed a systematic approach of analyzing a liver under cancer positive environment. We have proposed a technique for tumor identification and segmentation using image smoothing and refining methods. When we use CT images for the detection of liver tumor manual interaction is not necessary, since it works automatically. The projected method needs to learn a few model parameters such as tumor part, non-tumor part, and segment liver regions. The complete system is divided into the training part and testing part respectively and this system is based mainly on SVM. The input liver image undergoes for the preprocessing step and image segmentation. Preprocessing includes many steps like the resizing of an image, improve the clarity of the image, conversion form colored image into grayscale. After these necessary features are collected from the resulting image. These collected features are then fed to the SVM for training. These collected features are compared with examination results by the SVM Classifier with the existing trained features using RBF kernel. Contingent upon the correlation result, the classifier gives the outcome.

Keyword: Contingent upon the correlation result, the classifier gives the outcome.

References:
Abstract: Machine learning is utilized to empower a program to analyze information, understand correlations and make utilization of bits of knowledge to take care of issues or potentially enhance information and for prediction. The American Heart Association Statistics 2016 Report shows that coronary illness is the main source of death for people, responsible for 1 in every 4 deaths. Machine learning algorithms play a very important role in medical area. We use machine learning to understand, predict, and prevent cardiovascular disease using numeric data. The end goal is to produce an approved machine learning application in healthcare. In an effort to refine the search for a useful and accurate method with the dataset, the results of several algorithms will be compared. The front-runners will be analyzed and used to develop a unique, higher-accuracy method. Machine learning methods inclusive of Logistic Regression, Naive Bayes, Decision tree(CART). We use ensemble learning for better accuracy which includes algorithms like Random Forest, XGBoost, Extra trees classifier. Also, our work adds to the present literature by giving a far reaching review of machine learning algorithms on sickness prediction tasks. Our goal is to perform predictive analysis with these machine learning algorithms on heart diseases using ensembles like bagging, boosting, stacking. Machine Learning algorithms used and conclude which techniques are effective and efficient. A huge medical datasets are accessible in different data repositories which used in the real world application.

Keyword: Machine learning, Cardiovascular disease, Decision tree(CART), Ensemble learning.

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**Keyword:** RSA, AES, LSB, OTP

**References:**

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**Authors:** Ambika Rani Subhash, Ashwin kumar UM

**Paper Title:** Accuracy of Classification Algorithms for Diabetes Prediction

**Abstract:** The illness that happens in the human body because of enormous amounts of sugar in the blood, i.e., when the human body has elevated amounts of glucose in the blood is Diabetes Mellitus all the more ordinarily referred to just as diabetes. The diverse most usually happening assortments of diabetes are Prediabetes, Type2, Type 1 and Gestational Diabetes. Type 2 diabetes, is interminable and generally happens, when the human body does not usefully utilize the hormone, insulin, which is created by it. The Type 1 assortment happens when the pancreatic organ doesn't deliver enough insulin as is required by the human body. Prediabetes is one that occurs when the blood sugar levels are very high but not as much when compared to the Type 2 variety. Gestational diabetes usually affects pregnant women and here also the blood sugar levels are very high. According to the global report by the WHO (World Health Organization), around 422 million people suffer from the disease and a worrying 1.6 million odd deaths are credited only to diabetes every year. However, timely diagnosis of the disease and care of patients through simple lifestyle measures has proven to keep this deadly disease in check. The main challenge for doctors however, is the tedious process of identifying the factors that cause the occurrence of this disease, in an effective and timely manner. During the recent times this challenge is being addressed through Data Mining and Machine Learning techniques. The main aim of this experimentation is for designing a prediction model which can, with utmost accuracy, diagnose the occurrence of diabetes in patient. These training models have been designed using the WEKA tool and four supervised machine learning classification algorithms such as Naïve Bayes, J48, SVM and Neural Networks have been used to predict the onset of diabetes at an early stage. The dataset used here is the Pima Indian Diabetes training Dataset abbreviated as PIDD, which has been acquired from the UCI repository. Chi-squared tests have been applied on this dataset to obtain only those attributes that have the highest tendency of causing diabetes in patients. The performance of each of the classification algorithms have been compared and analyzed based on Accuracy, F-measure, Recall, Precision and ROC curves.

**Keyword:** Naïve Bayes, J48, SVM, Neural Networks/Multilayer Perception, Diabetes, Chi-squared test, WEKA, Accuracy

**References:**

Type 2 Diabetes”, IEEE Southeastcon, April 2019

Authors: L A Lalitha, Vishwanath R Hulipalled

Paper Title: Adaptive k-Nearest Centroid Neighbor Classifier for Detecting Drifted Twitter Spam

Abstract: With the growth of Internet and its related technologies have resulted in increased usage of smart and Internet connected devices and large amount of time is spent on Social Network. Nonetheless, because of increase in attractiveness of Social Network, cyber offenders are spreading spam on these networks to exploit possible targets. The spammers trap users to malware downloads or external phishing URLs, which has been an enormous problem for online safety and user quality of exposure. However, the existing research fails to detect spam in Twitter and has become a key issue in recent times. Recent work [14], focused on using Machine Learning (ML) approach for detecting spam in Twitter, by making use of the statistical features of Twitter data. However, adoption of such method affects the classification accuracy of ML algorithm. Because the Statistical Feature characteristics of spam tweets vary with respect to time. This problem is known as “Twitter Spam Drift”. To address this problem, we present a novel non-parametric Adaptive K-Nearest Centroid Neighbor (AKNCN) Classifier. Further, for meeting real-time requirement the AKNCN is trained using one million spam tweets and one million non-spam tweets data. The AKNCN model can discover spam more efficiently than the state-of-the-art model. Experiment outcome shows the AKNCN attains significant performance with reference to Accuracy (A), F-Measure (F) and Detection Rate (DR) in real-world scenarios.

Keyword: Nearest Centroid Neighbor, Machine Learning, Social Networks, Statistical Features, Spam Drift, Twitter Spam Detection.

References:

235-243
Paper Title: Optimizing Random Forest to Detect Disease in Apple Leaf

Abstract: Green Revolution was introduced in agriculture to meet the food scarcity. Despite the increase of agricultural production, farmers are challenged by infestations. Infestation reduced the crop yield. Traditional method involved manual inspection of plants to identify diseases. With advancement in technology, the infected plant leaves can be captured into images and subjected to processing by computing element. The computing system are being trained to process the image using Machine Learning algorithms to classify the images. Processing the image and detecting with improved accuracy is essential. Random Forest classifier is used to detect the disease in Apple Leaf. The accuracy of prediction by Random Forest can be influenced by configuring its parameters. This Paper talks about the various options that can be applied to optimize Random Forest classifier for improving the accuracy of detecting Apple Leaf disease.

Keyword: Machine Learning Algorithm, Random Forest, Apple leaf disease detection.

References:

50. Authors: Girish G, M. Prabhakar
Paper Title: Device Contextual Content Publishing in Media & Publishing Industry using Big Data Analytics on AWS
Abstract: Media & Publishing industry was traditionally a Paper and Print Industry. Since the revolution of Internet, industry started moving print to the digital form. Ever since the rapid penetration of mobile phones the media industry has rapidly scaled down paper publishing and adopted digital form successfully.
Internet speeds have also increased the adoption of Digital Print’s. With Newspapers being accessed globally in its digital form, it is extremely important for publishers to keep their content readily accessible and rich for various devices – Tablets, Laptops, Desktop’s, Mobile Phones, Smart Watches, Digital reader’s etc.
This Paper talks about an ECONOMICAL & HIGHLY SCALABLE Big data analytics implementation using AWS Elastic Map Reduce (EMR) to derive trends on end user usage patterns and choice of device. This will help the publishers rapidly scale to provide device contextual content to end users with ever changing access mechanisms.

Keyword: WS-EMR, BigData, Device-Contextual, Media&Publishing
References:
3. Google Consumer Barometer
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51. Authors: Mohan Kumar K N, S.Sampath, Mohammed Imran
Paper Title: An Overview on Disease Prediction for Preventive Care of Health Deterioration
Abstract: Machine learning in health care has recently made headlines. With the wide spread increase of population, the need for reliable mechanism to prevent diseases has increased in manifold. In the recent days there is an increase in health problems in majority of the population across the globe. The reason for health problems is not specific but it has become very uncertain. If we take a sample from the population, it should not be a surprise to see a person suffering from ailments irrespective of age and quality of life. For example, chronic diseases are found in people at a very young age. So this situation poses a serious challenge for clinical experts to find the root cause. It is difficult to accurately predict the future health based on the current health status because the scenario might not be same for all the patients. Providing an affordable, high quality health care service has become a big challenge. In this regard, preventive care of diseases is investigated for decades. It is an area of regular extension of research works and progression day by day and there is sufficient literature available on prediction of diseases. Our work includes a disciplined study to consolidate existing works on prediction and classification of diseases. This paper will provide technical insight and paves way for future developments in the health care field.

Keyword: Machine Learning, Health, Entropy, Disease Prediction, Diabetes, features, metrics, ICD, HCC.
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Authors: Shivapanchakshari T G, H S Aravinda

Paper Title: Adaptive Resource Allocation using various Smart Antenna Techniques to maintain better System Performance

Abstract: Smart antennas are capable of offering major contribution in improving system performance of orthogonal frequency division multiplexing (OFDM) systems. The OFDM is an air-link technology required for future wireless communication applications to address the technological challenges in fulfilling users demand. The adaptive resource allocation techniques in OFDM systems using smart antennas is an optimistic approach showing light towards developing various methods to improve spectral efficiency with required quality of service (QoS). However, fully adaptive techniques increase the challenges in designing the physical layer with minimum complexity. Now, the challenge is to investigate the possibility of achieving satisfactory system performance without increasing complexity at MAC layer of next generation OFDM systems. In this paper, methodology of designing a hybrid smart antenna system is proposed to achieve required QoS with minimum system complexity.

Keywords: Adaptive resource allocation, Orthogonal Frequency Division Multiplex (OFDM), Quality of Service (QoS), Hybrid Smart Antenna.

References:
The paper aims at building a prototype for solving the problem of a rare neurological disorder 'Prosopagnosia'. It is also called face blindness / facial agnosia. This is a behavioral disorder of face perception that impairs the ability to detect familiar faces, which include one's own face, while other forms of visual processing and intellectual functioning remain intact. The Extensive research has indicated 1 out of 50 people may have this neurological disorder. In order to help the significant number of affected people overcome this difficulty, we have built a prototype which uses a camera to capture the image and an appropriate face recognition code using the Histogram of Oriented Gradients (HOG) approach is implemented for face detection. After detection, SVM classifier is used for classification and the name of the identified person will be displayed. Simultaneously, the conversation is being recorded and text mining is performed to extract the keywords of the conversation. The result is displayed on a suitable interface. The hardware module Raspberry Pi is used as a processor for processing the incoming image and audio data.

Keywords: Prosopagnosia, Raspberry Pi, HOG, Healthcare applications, Internet of Things.

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