SETHU INSTITUTE OF TECHNOLOGY
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DEPARTMENTOF COMPUTER SCIENCE AND ENGINEERING

SITCON 2022-5thINTERNATIONAL CONFERENCE ON RECENT INNOVATIONS IN INFORMATION AND COMPUTING TECHNOLOGIES -JULY 22- 23, 2022

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ORGANIZED BY

DEPARTMENT OF
COMPUTER SCIENCE AND TECHNOLOGY

ABOUT THE INSTITUTION

Sethu Institute of Technology, an Autonomous Institution is the brainchild of our Founder and Chairman, Mr. S. Mohammed Jaleel to provide quality technical education to for all the students and hone the aspiring professional in them ever since its establishment in 1995. The college is approved by All India Council for Technical Education and it is affiliated to Anna University. Our College is an NAAC accredited with 'A "grade Institution currently offers fourteen UG and five PG programmes. The Campus is a sprawling expanse of 135 acres that houses the departments and their laboratory infrastructure, accompanied with a house of residence, and a spectrum of comforts like Library which has 60120 volumes of books, 630 online journals, 201 National Journals, 44 Magazines and Barcode Technology for lending books, Transportation Facility with 60 buses, 25 vans and an ambulance, Canteen, ATM and a Post Office in the premises of the college.

COLLEGE VISION

To promote excellence in technical education and scientific research for the benefit of the society.

COLLEGE MISSION

- To provide quality technical education to fulfill the aspiration of the student and to meet the needs of theindustry
- To provide holistic learning ambience toimpart skills leading to employability and entrepreneurship
- To establish effective linkage withindustries
- To promote Research and Developmentactivities
- To offer services for the development of society through education andtechnology

ABOUT THE DEPARTMENT

The computer and its uses conquer the entire world with its inevitable existence. India is making rapid strides and it transforms itself into aknowledge hub for several arenas. In this context, the Department of Computer Science and Engineering was inaugurated in the year 1995 forproducing highly competent and globally competent professionals. The Computer Science and Engineering program enables the students to acquaint themselves with the latest developments in the field ofcomputational technologies and also to learn innovative approaches inprogramming subjects.The department shares the mission and vision of the institute inimparting quality education to the students. The department has accomplished several laurels in fulfilling its mission to pursue excellence. Highly sophisticated and the latest configuration computerswere installed in various laboratories to cater to the students quest forknowledge. All the facilities were provided to the students and facultymembers to keep abreast of the latest technologies.The department offers qualitative training and scope for more research.It is approved as a research centre by Anna University, Chennai. Around 25 faculty members, including various institutions and our institution are pursuing their Ph.D degree in Anna University under our research centre. It also promotes active industry-institute collaboration byidentifying areas of interest and taking part in sponsored researchprojects. The department offers undergraduate, postgraduate degree and Ph.D., programmes.

DEPARTMENT VISION

To achieve excellence in technical education and scientific research in the field of computer science and engineering to contribute to the society.

DEPARTMENT MISSION

- Transforming students into technocrats in computer technology confirming the industry expectation.
- Imparting holistic learner centric environment.
- Cultivating interpersonal traits, problem solving skills, critical and rationale thinking capabilities for the development of students leading to innovators, leaders and entrepreneurs.
- Establishing collaboration with the industries for mutual benefits.
- Promoting Research activities among the students and the faculty to solve problems related to industry and society.
- Offering computer applications life skill to society for better living.

ABOUT THE CONFERENCE

International Conference on “Recent Innovations in Information and Computing Technologies” – RIICT is being conducted by Departments of Computer Science and Engineering, Sethu Institute of Technology on 22nd & 23rd July 2022.

The conference is going to be organized in a grand way, in which a large number of academicians, Research Scholars, Industry professionals and Students from various Technical Institutions / Universities, Research Laboratories across the globe will meet and share their research findings. RIICT’22 will afford delegates unparalleled opportunities to communicate with competent professionals throughout the world prompt a tight link between theory and practice and explore different research perspectives and innovations in the interdisciplinary as well as domain specific approaches. Eminent keynote speakers are invited from various universities to share their experiences, research findings as well as future directions. We cordially invite you to participate in the conference and make it a grand success.

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A.Sheik Hussain	III Year C

Contents

Retinopathy Detection Deep learning Algorithm

Dr.V.Shunmughavel [1] , Dr.R. Rubesh Selvakumar [2], J.Hemalatha [3],
J. Hani Suruthy[4], M.Harishma Devi[5]
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Abstract— Diabetic retinopathy is a vascular disease caused by uncontrolled diabetes. Its early detection can save diabetic patients from blindness. However, the detection of its severity level is a challenge for ophthalmologists since last few decades. Several efforts have been made for the identification of its limited stages by using pre- and post-processing methods, which require extensive domain knowledge. This study proposes an improved automated system for severity detection of diabetic retinopathy which is a dictionary-based approach and does not include pre- and post-processing steps. This approach integrates pathological explicit image representation into a learning outline. To create the dictionary of visual features, points of interest are detected to compute the descriptive features from retinal images through speed up robust features algorithm and histogram of oriented gradients. These features are clustered to generate a dictionary, then coding and pooling are applied for compact representation of features. Radial basis kernel support vector machine and neural network are used to classify the images into five classes namely normal, mild, moderate, severe non-proliferative diabetic retinopathy, and proliferative diabetic retinopathy. The proposed system exhibits improved results of 95.92% sensitivity and 98.90% specificity in relation to the reported state of the art methods.

Improved Homomorphic Encryption for Neural Network Learning Data on the Cloud

Arul Veronica R [1], Augustina Christy P [2], Bhuvaneshwari M [3], Ms.M.Sanmugapriya [4]
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Abstract— Multilevel thresholding has got more attention in recent years with various successful applications. However, the implementation becomes more and more complex and time-consuming when the number of thresholds is high. Therefore, this paper proposes an alternative hybrid algorithm for color image segmentation, the advantages of which lie in extracting the best features from the high performance of two algorithms and overcoming the limitations of each algorithm to some extent. Two techniques, Otsu's method, and Kapur's entropy, are used as fitness function to determine the segmentation threshold values. Harris hawks optimization is a novel and general-purpose algorithm, and the hybridization of HHO is fulfilled by adding another powerful algorithm differential evolution, which is known as HHO-DE. More specifically, the whole population is divided into two equal subpopulations which will be assigned to HHO and DE algorithms, respectively. the proposed method is compared with the seven state-of-the-art algorithms by an array of experiments on medical images. Meanwhile, fitness values, standard deviation, peak signal to noise ratio , structure similarity index , and feature similarity index, are used to evaluate the performance of each algorithm on the image segmentation.

Enabling Efficient User Revocation in Identity-Based Cloud Storage Auditing for Shared Big Data

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Abstract— Cloud storage auditing schemes for shared data refer to checking the integrity of cloud data shared by a group of users. User revocation is commonly supported in such schemes, as users may be subject to group membership changes for various reasons. Previously, the computational overhead for user revocation in such schemes is linear with the total number of file blocks possessed by a revoked user. The overhead, however, may become a heavy burden because of the sheer amount of the shared cloud data. Thus, how to reduce the computational overhead caused by user revocations becomes a key research challenge for achieving practical cloud data auditing. In this paper, we propose a novel storage auditing scheme that achieves highly-efficient user revocation independent of the total number of file blocks possessed by the revoked user in the cloud. This is achieved by exploring a novel strategy for key generation and a new private key update technique. Using this strategy and the technique, we realize user revocation by just updating the non-revoked group users' private keys rather than authenticators of the revoked user. The integrity auditing of the revoked user's data can still be correctly performed when the authenticators are not updated. Meanwhile, the proposed scheme is based on identity-base cryptography, which eliminates the complicated certificate management in traditional Public Key Infrastructure systems. The security and efficiency of the proposed scheme are validated via both analysis and experimental results

Liver Tumor Detection Using Resnet-50 Feature Extraction and SVM Classification

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Abstract—Liver cancer is a type of dangerous cancer and is difficult to detect. It usually causes death, so it is more necessary to correctly examine it. Accordingly, several techniques have been implemented to detect liver cancer in the early stages. There have been too many methods developed in recent years to diagnose liver cancer. From this study it has been found that CT scan images are more suitable to have the accurate results. Therefore, mostly CT scan images are used for detection of cancer. Most of the existing systems are used to extract the features are paired with deep learning algorithms to use image recognition to extract the features from liver cancer images. In this proposed system, CLAHE filter is used for increasing the contrast of the input images. After the filtering process the image is send to the feature extraction using resnet-50 based deep learning. And then, the classification is done by Support Vector Machine to classify the images which are normal or affected, with higher accuracy. After the classification process the performance measure values calculated such as accuracy, precision, recall, f1-score values. And these performance results shows that the proposed system which shows the better results than the existing system.

Forest Fire Detection Using Deep Learning

S. Ajithkumar[1], S. Akashkumar[2], B. Dharshan[3], Mrs. M. SanmugaPriya[4]
U.G. Student [1, 2, 3], Assistant Professor [4]
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Abstract—Forest-fires are real threats to human lives, environmental systems and infrastructure. It is predicted that forest fires could destroy half of the world‘s forests by the year 2030. The only efficient way to minimize the forest fires damage is adopt early fire detection mechanisms. Thus, forest-fire detection systems are gaining a lot of attention on several research centers and universities around the world. Currently, there exists many commercial fire detection sensor systems, but all of them are difficult to apply in big open areas like forests, due to their delay in response, necessary maintenance, high cost and other problems. In this study, image processing based has been used due to several reasons such as quick development of digital cameras technology, the camera can cover large areas with excellent results, the response time of image processing methods is better than that of the existing sensor systems, and the overall cost of the image processing systems is lower than sensor systems. Accurate forest fires detection algorithms remain a challenging issue, because some of the objects have the same features with fire, which may result in high false alarms rate. This presents a new video-based, image processing forest fires detection method, which consists of four stages. First, a background-subtraction algorithm is applied to detect moving regions. Secondly, candidate fire regions are determined using RGB color space. Thirdly, features extraction is used to differentiate between actual fire and fire-like objects, because candidate regions may contain moving fire-like objects. Finally, convolutional neural network algorithm is used to classify the region of interest to either real fire or non-fire. The final experimental results verify that the proposed method effectively identifies the forest fires.

Encryption and Decryption Using Steganography

C.Ragul, S.Murugan, S.Mohammed Thoufiq, Ms.S.MadhuSangeetha
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Abstract—Maintaining secrecy is very important in a large corporation and because of the intelligent of the hackers it becomes tedious. Already we have cryptography for transmitting secret information. Even though cryptography successfully transmitting secret information, it will give a suspicion to the hackers and it affects unintended users. Our project, ‒Encryption and Decryption using Steganography‖ overcomes this factor and it gives a solution for transmitting secret formation without affecting unintended users. Steganography uses multimedia data as acovering medium (Covering secret information). By using steganography data(secret information) can hided with in data (multimedia data, here multimedia data is an image) and it can be sent anywhere to transfer the message easily without tgiving any suspicion to others. Steganography is the science that involves communicating secret data in an appropriate multimedia carrier, e.g., image, audio ,and video files. It comes under the assumption that if the feature is visible, the point of attack is evident, thus the goal here is always to conceal the very existence of the embedded data. Steganography has various useful applications. However ,like any other science it can be used for ill intentions. It has been propelled to theforefront of current security techniques by the remarkable growth in computational power, the increase in security awareness by, e.g., individuals, groups, agencies ,government and through intellectual pursuit.

Medical Image Segmentation Using HHO-ADE Optimization Based on Multi-Thresholding

Dr.V.Shunmughavel [1] , Dr.R. RubeshSelvakumar [2], J.Hemalatha [3], J. Hani Suruthy [4] ,M. Harishma Devi [5]
Professor[1], Associate Professor[2] , U.G. Student [3,4,5]
Sethu Institute of Technology

Abstract— Diabetic retinopathy is a vascular disease caused by uncontrolled diabetes. Its early detection can save diabetic patients from blindness. However, the detection of its severity level is a challenge for ophthalmologists since last few decades. Several efforts have been made for the identification of its limited stages by using pre- and post-processing methods, which require extensive domain knowledge. This study proposes an improved automated system for severity detection of diabetic retinopathy which is a dictionary-based approach and does not include pre- and post-processing steps. This approach integrates pathological explicit image representation into a learning outline. To create the dictionary of visual features, points of interest are detected to compute the descriptive features from retinal images through speed up robust features algorithm and histogram of oriented gradients. These features are clustered to generate a dictionary, then coding and pooling are applied for compact representation of features. Radial basis kernel support vector machine and neural network are used to classify the images into five classes namely normal, mild, moderate, severe non-proliferative diabetic retinopathy, and proliferative diabetic retinopathy. The proposed system exhibits improved results of 95.92% sensitivity and 98.90% specificity in relation to the reported state of the art methods.

Information Transmission using Steganography

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Assistant Professor [1], U.G. Student [2] [3] [4]
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Abstract — Cryptography has a widely accepted and fascinating concept. The proliferation of computers and communications systems in the recent years has brought with it a demand from the private sector for means to protect information in digital form and to provide security services. Cryptography also ensures privacy, confidentiality, data integrity, entity authentication or identification, message authentication, signature, validation, access control, certification endorsement, time-stamping, ownership, etc. Cryptography has two divisions Encryption and Decryption. In simple terms, Encryption is the science of changing data so that it is unrecognizable to an unauthorized person. Decryption is changing it back to its original form. Steganography is yet another concept of securing information in images, audio or video files, thereby ensuring that no intruder gets to know about the information hidden in it. More commonly Steganography is used to supplement encryption. Like Cryptography, Steganography also finds its importance in Maintaining anonymity, Copyright protection, etc. In this paper try to implement this technique ―Cryptography and Steganography‖ with a user friendly interface, in a highly secure manner using different schemes. The privacy details of sender and receiver sides are securely maintained.

Secure Intrusion Detection System against DDOS Attack in Wireless ADHOC Network

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U.G. Student [1, 2, 3], Assistant Professor [4]
Sethu Institute of Technology

Abstract—Cloud computing plays an important role in our daily life, because it provides efficient, reliable and scalable resources for data storage and computational activities at a very low price. However, the direct access of the cloud to the sensitive information of its users threatens their privacy. So every file should be encrypted before uploaded into the cloud server. If the data is shared with others, in a secure attribute based keyword search scheme, a data owner cannot obtain any information about the keywords which the data users intend to look for. However, in all of the public key encryption with keyword search and attribute based keyword search schemes, once the cloud receives a valid search token related to a certain keyword, the cloud can investigate the keyword presence in the past and any future cipher text. Therefore, it will be more secure to limit the time period in which the search token can be used. This project proposes a novel notion of Key-Policy Attribute-Based Temporary Cloud computing plays an important role in our daily life, because it provides efficient, reliable and scalable resources for data storage and computational activities at a very low price. However, the direct access of the cloud to the sensitive information of its users threatens their privacy Keyword Search. In this scheme, the data owner generates a searchable ciphertext related to a keyword and the time of encrypting according to an intended access control policy, and outsources it to the cloud.

Identification of Quality Products Using Block Chain Technology

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U.G. Student [1] [2] [3], Assistant Professor [4]
Sethu Institute of Technology

Abstract—Anti-counterfeit technology has attracted much attention with the development of economy, because many counter it products that are difficult for identification have been produced, which extremely damage the interests of consumers. The public's attitude of greedy for petty and cheap has encouraged unscrupulous manufacturers to take advantage of the opportunity to provide low-cost counterfeit products, suppress the profits of legitimate manufacturers, and also make the public lose confidence in the quality of the products. At present, the most widely used anti-counter feiting system based on Qrcodes. Determining of blood types is very important during emergency situation before administering a blood transfusion. Presently, these tests are performed manually by technicians, which can lead to human errors. Determination of the blood types in a short period of time and without human errors is very much essential. A method is developed based on processing of images acquired during the slide test. The image processing techniques such as thresholding and morphological operations are used. The images of the slide test are obtained from the pathological laboratory are processed and the occurrence of agglutination are evaluated. Thus, the developed automated method determines the blood type sing image processing techniques. The developed method is useful in emergency situation to determine the blood group without human error.

Attribute based encryption approach for storage sharing and retrieval of encrypted data in the cloud

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Abstract—Cloud computing plays an important role in our daily life, because it provides efficient, reliable and scalable resources for data storage and computational activities at a very low price. However, the direct access of the cloud to the sensitive information of its users threatens their privacy. So every file should be encrypted before uploaded into the cloud server. If the data is shared with others, in a secure attribute based keyword search scheme, a data owner cannot obtain any information about the keywords which the data users intend to look for. However, in all of the public key encryption with keyword search and attribute based keyword search schemes, once the cloud receives a valid search token related to a certain keyword, the cloud can investigate the keyword presence in the past and any future cipher text. Therefore, it will be more secure to limit the time period in which the search token can be used. This project proposes a novel notion of Key-Policy Attribute-Based Temporary Cloud computing plays an important role in our daily life, because it provides efficient, reliable and scalable resources for data storage and computational activities at a very low price. However, the direct access of the cloud to the sensitive information of its users threatens their privacy Keyword Search. In this scheme, the data owner generates a searchable ciphertext related to a keyword and the time of encrypting according to an intended access control policy, and outsources it to the cloud.

CT Image Based Covid-19 Detecting Intelligent System Using CNN and RNN 101

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Abstract — The outbreak of corona virus disorder 2019 had a massive impact on international fitness and everyday life in many nations. Chest CT is emerging as a treasured diagnostic tool for medical control of COVID-19 related lung ailment. Artificial Intelligence has the potential to resource in speedy assessment of CT scans for differentiation of COVID-19 findings from different medical entities. The purpose of this work to detect abnormalities within the affected lung region in addition to enhance fine segmentation, accuracy of disorder and sort out the problem with high accuracy rate. Firstly, grouped images from CT scan datasets based on their compatible functions in distinct clusters with the help of convolution layer that allows you to discriminate among the COVID-19 and non COVID-19 cases. A deep learning model based convolution neural network is proposed for detection and classification of COVID-19 from CT scan images. The proposed approach is compared with the RESNET101 for comparative analysis. The proposed CNN can achieve high accuracy in diverse patent populations.

Texture Based Skin Lesion Segmentation and Classification Using VGG 19 and CNN

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Assistant Professor [1] [3], Professor & PG-Head/CSE [2], Assistant Prof (S.G) [4]
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Abstract—Melanoma is one of the most deadly skin diseases in the world. Prevention of Melanoma is one of the ways to reduce the death rate. Automatic methods such as deep Learning Techniques in Image processing is used to prevent. The pre-processing is done by getting input images. Gray scale, Gaussian filter Effects, Otsu Threshold is applied to the input images and Lesion is Traced and unwanted pixels are been removed from Threshold Image. The Traced Lesion image is got passed to Texture Distinctiveness. Texture Distinctiveness consists of Sparse texture distributions and Texture Distinctiveness metric. The Sparse texture distributions and Texture Distinctiveness metric are done by applying k means clustering on image and finding the Gaussian Mixture Modelling. Region classifications of the images are done by using some SRM segmentation on the image and the sobel edge detection of the image is done. The image got segmented by the above methods with Distinctiveness based Segmentation. In this project for segmentation MATLAB software is being used and for the classification Google colaboratory is used for python. Totally 2322 images (1436 images for benign and 1181 images for malignant) used for training and 660 images (360 images for benign and 300 images for Malignant) used for testing. The classification techniques used here are VGG-19 and CNN. The Classification shows whether the lesion is Benign or Malignant (Melanoma). In this Project it is found that the CNN shows the Accuracy of 79.00 % and VGG-19 shows the Accuracy of 89.37%. From this the VGG-19 has higher Accuracy compared to CNN. This paper proposes Texture Distinctiveness Lesion Segmentation along with comparison of CNN and VGG 19.

Blood Group Detection Using Image Processing

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Sethu Institute of Technology

Abstract—Determining of blood types is very important during emergency situation before administering a blood transfusion. Presently, these tests are performed manually by technicians, which can lead to human errors. Determination of the blood types in a short period of time and without human errors is very much essential. A method is developed based on processing of images acquired during the slide test. The image processing techniques such as thresholding and morphological operations are used. The images of the slide test are obtained from the pathological laboratory are processed and the occurrence of agglutination are evaluated. Thus, the developed automated method determines the blood type sing image processing techniques. The developed method is useful in emergency situation to determine the blood group without human error.

Auto-Context Convolutional Neural Network (Auto-Net) for Brain Extraction in Magnetic Resonance Imaging

J.Jeyaprabhu [1],Dr.R. Rubesh SelvaKumar [2]
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Sethu Institute of Technology

Abstract — A Brain stroke is a medical condition in which poor blood flow to the brain results in cell death. It is causing to death all over the world. Several risk factors believe to be related to the cause of stroke has been found by inspecting the affected individuals. Using these risk factors, a number of works have been carried out for predicting and classifying stroke diseases. It uses machine learning algorithm to detect the stroke that can possibly occur or occurred form a person‘s physical state and medical report data. Machine Learning techniques which are applied to identify, classify, and predict the Brain stroke from medical information. Machine learning algorithm helps better understanding of diseases and can be a good healthcare companion. It helps to identify the early prediction of stroke diseases by using machine learning approaches with the occurrence of hypertension, body mass index level, heart disease, average glucose level, smoking status, previous stroke and age. It is a system which provides how to maintain the health systems of the user and it provides a way to find out the disease using this prediction.

Translating Neural Signals to Text Using a Brain-Computer Interface

Dr. R.Rubesh Selvakumar [1] ,Dr.V.Shunmughavel [2], T.Aathinarayanan [3], N.Branesh [4], S.Gokul Prasath [5]
Associate Professor [1], Professor [2], U.G. Student [3] [4] [5]
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Abstract—Brain-Computer Interfaces may help patients with faltering communication abilities due to neurodegenerative diseases produce text or speech by direct neural processing. However, their practical realization has proven difficult due to limitations in speed, accuracy, and generalization of existing interfaces. To this end, we aim to create a BCI that decodes text directly from neural signals. We implement a framework that initially isolates frequency bands in the input signal encapsulating differential information regarding production of various phonemic classes. We provide empirical evidence that our interface achieves an average accuracy of 32% calculated against a full corpus, i.e. one encompassing all feasible English words that can be formulated using the entire set of phonemes uttered by a patient, These bands form a feature set that feeds into an LSTM which discerns at each time point probability distributions across all phonemes uttered by a subject. Finally, a particle filtering algorithm temporally smooth these probabilities incorporating prior knowledge of the English language to output text corresponding to the decoded word.

Improved Robust Data Encryption and Decryption for an Image Using Reversible Data Hiding

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Assistant Professor (Sr.G) [1], U.G.Student [2,3,4,5]
Sethu Institute of Technology

Abstract—A reversible data hiding method in encrypted image is proposed. Prior to image encryption, the embeddable pixels are selected from an original image according to prediction errors due to adjacent pixels with strong correlation. Then the embeddable pixels and the other pixels are both rearranged and encrypted to generate an encrypted image. Secret bits are directly embedded into the multiple MSBs (most significant bit) of the embeddable pixels in the encrypted image to generate a marked encrypted image during the encoding phase. In the decoding phase, secret bits can be extracted from the multiple MSBs of the embeddable pixels in the marked encrypted image. Moreover, the original embeddable pixels are restored losslessly by using correlation of the adjacent pixels. Thus, a reconstructed image with high visual quality can be obtained only when the encryption key is available. Since exploiting multiple MSBs of the embeddable pixels, the proposed method can obtain a very large embedding capacity.

Fabrication and UV Characterisation of n-Zno/p-Si based Heterojunction Diodes

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Abstract—The nanostructured ZnO film was prepared on a texturised Si wafer by the RF Sputttering method to fabricate n-ZnO/p-Si heterojunction photoelectric device.The structural and electrical properties of the nanostructured ZnO film were studied by XRD, EDX, and SEM. The electrical and photo response property of fabricated p-Si/n-ZnO heterojunction diode was confirmed by measuring I–V and C–V characteristics. The I-V characteristic of the heterojunction diode is asymmetrical with a rectification ratio of order three order at ±2V, turn-on voltage of 0.82 V and ideality factor of 6.15. It is also showed very good photoresponse with under UV illumination (365nm). Comprehensive results suggested that the grown film is an excellent semiconductor material and proposed diode is alternative device for GaN based UV detector.

Privacy Aware Data Deduplication for Side Channel In Cloud Storage

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Abstract—As one of a few critical technologies to cloud storage service, deduplication allows cloud servers to save storage space by deleting redundant file copies. However, it often leaks side channel information regarding whether an uploading file gets deduplicated or not. Exploiting this information, adversaries can easily launch a template side-channel attack and severely harm cloud users‘ privacy. To thwart this kind of attack, we resort to the k-anonymity privacy concept to design secure threshold deduplication protocols. Specifically, we have devised a novel cryptographic primitive called ―dispersed convergent encryption‖ scheme. Experimental evaluations show our protocols enjoy very good performance in practice.We show the efficiency of the proposed framework by evaluating on real dataset and comparing the communication cost of the proposed solutions, and prove the privacy.

Plant Disease Recognition in Plant Village Dataset Using Deep Learning Approach

K. Haritha [1], P. Chandralekha [2], P. Divyabharathi [3], Mrs. B. Lalitha [4],
U.G. Student [1,2,3], Assistant Professor [4]
Sethu Institute of Technology

Abstract—Now we are living in an era where the problem regarding agriculture is a major issue nowadays. The major problem in crop growth is we have to take care of the health of the plants and crops. Agriculture is one field which has a high impact on life and economic status of human beings. Improper management leads to loss in agricultural products. This process is to detect the plant leaf disease detection using the deep neural network the alternative of Densenet121 neural network. This can easily detect the disease of plant leaf. First select the plant village dataset and apply into pre-processing method. In this part it is very useful to identify the disease, then it will process into model selection and classification. In classification it will train the dataset and the disease can analyze and show the status of plant leaf that is healthy or unhealthy. The disease can be detected in the image of plant leaf. The predicted result based on accuracy.

An Emerging technology for enhancing data security using DNA cryptographic algorithm in cloud

D. Joshi Angel Saranya [1], B. Guruprakash [2], T. Siva [3]
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Sethu Institute of Technology

Abstract—Cloud computing is a trending service in the world and shares terabytes of data every day. Data security plays a crucial role while sharing data on public networks. A DNA cryptography algorithm has been proposed to preserve the security of the data. A lot of cryptographic techniques are available in the crypto era, but still, cyber-attacks are happening in day-to-day life. This paper took this as a major issue and proposed a new technique for secure data sharing in the cloud environment. Initially, the source text is underlying a biological process, and finally the ciphertext can be sent in terms of DNA sequences by performing lots of permutation and combination levels before sending the data to the cloud network. The efficiency of the algorithm is proven by using the dynamicity concept.

Efficient IoT Management with Resilience to Unauthorized Access to Cloud Storage

NoorMohamed. I, C.Kanna, K.R.Manoj Kumar,R.Manuj
Assistant Professor [1], UG Student [2, 3, 4]
Sethu Institute of Technology

Abstract—Cloud-based data management services are a promising means of ingesting data from globally dispersed devices. This project proposes an efficient and secure cloud based data management scheme using our novel CP-ABE construction. Specifically, in cipher text-policy ABE an encryption can specify an access policy for the cipher text with a set of descriptive attributes. The proposed scheme features efficient storage and bandwidth management, and capability of tracing traitors if they illegally share their secret keys. The cloud server can perform a significant part of the computational overhead related to decryption via a user-specific transformation key. This key is crucial in forbidding unauthorized access by a shared (or leaked) key holder. Thus, users holding a shared or leaked key cannot recover the data. Correct decryption is available only for the original key owner. The proposed scheme is resilient to the forensically intractable key abuse attacks and it is resilient to the illegal key sharing attacks. When user downloads the data, he should give decryption key and one of the access policies, which are given by user during registration.

Brain Stroke Prediction Using Machine Learning Techniques

S.FathimaNihla, M.BangaruPriyadharsini, B.Brindha , Mrs.S.Gospeline Christiana
U.G. Student [1, 2, 3], Assistant Professor (CSE) [4]
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Abstract—A Brain stroke is a medical condition in which poor blood flow to the brain results in cell death. It is causing to death all over the world. Several risk factors believe to be related to the cause of stroke has been found by inspecting the affected individuals. Using these risk factors, a number of works have been carried out for predicting and classifying stroke diseases. It uses machine learning algorithm to detect the stroke that can possibly occur or occurred form a person‘s physical state and medical report data. Machine Learning techniques which are applied to identify, classify, and predict the Brain stroke from medical information. Machine learning algorithm helps better understanding of diseases and can be a good healthcare companion. It helps to identify the early prediction of stroke diseases by using machine learning approaches with the occurrence of hypertension, body mass index level, heart disease, average glucose level, smoking status, previous stroke and age. It is a system which provides how to maintain the health systems of the user and it provides a way to find out the disease using this prediction.

Estimation Form

Manav H [1], VincyInfana. S[2]
U.G. Student [1], Assistant Professor [2]
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Abstract—Zoho Books is online accounting software that manages your finances, automates business workflows, and helps you work collectively across departments. Online accounting software has many forms to fill which is an overhead to the user of the Zoho books. So, we planned to a form for our product which helps the Zoho books customers to save their time in their daily work. to create an estimate or to create a subscription which could save the time for the customer. The form will be available in the client portal

Stock Market Prediction using Machine Learning

R. ChinnaYuvaraja ,M. Dinesh ,K. Balaji Kumaran ,Dr. M. Malathi
U.G. Student [1, 2, 3] Professor & P.G. Head (CSE) [4]
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Abstract—In Stock Market Prediction, the aim is to predict the future value of the financial stocks of a company. The recent trend in stock market prediction technologies is the use of machine learning which makes predictions based on the values of current stock market indices by training on their previous values. Machine learning itself employs different models to make prediction easier and authentic. The paper focuses on the use of Regression and LSTM based Machine learning to predict stock values. Factors considered are open, close, low, high and volume.

Face Attendance Using Machine Learning Techniques

Dr. R. Rubesh Selvakumar [1] , Dr.V.Shunmughavel [2], M. Ajith Kumar [3] , K. Abhishek [4], S.Ashok Kumar [5]
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Abstract—With advances in computing and telecommunications technologies, digital images and video are playing key roles in the present information era. Human face is an important biometric object in image and video databases of surveillance systems. Detecting and locating human faces and facial features in an image or image sequence are important tasks in dynamic environments, such as videos, where noise conditions, illuminations, locations of subjects and pose can vary significantly from frame to frame.

Online Auction Fraud Detection System

P. Arunpandian [1] , B.Aswinamarnath [2] ,A. Faizal Ibrahim [3] , K. Nagalakshmi [4]
U.G. Student [1, 2, 3], Assistant Professor (Sr.G) [4]
Sethu Institute of Technology

Abstract—Determining of blood types is very important during emergency situation before administering a blood transfusion. Presently, these tests are performed manually by technicians, which can lead to human errors. Determination of the blood types in a short period of time and without human errors is very much essential. A method is developed based on processing of images acquired during the slide test. The image processing techniques such as thresholding and morphological operations are used. The images of the slide test are obtained from the pathological laboratory are processed and the occurrence of agglutination are evaluated. Thus, the developed automated method determines the blood type sing image processing techniques. The developed method is useful in emergency situation to determine the blood group without human error.

Deep Neural Network for Mass Segmentation and Classification in Mammograms

Maheswari G [1], Dr. Vairasuganthi G [2]
Assistant Professor [1], Professor [2]
Sethu Institute of Technology

Abstract—Breast cancer is one of the most common cancers among women. It is an asymptomatic cancer with no noticeable symptoms in its early stages. Regular mammography screening helps to detect breast cancer early. For the past 30 years, many researchers work with various machine learning algorithms to detect breast masses in mammograms. Recently, deep learning algorithms play a vital role in medical image analysis. In this paper, two deep neural network architectures are proposed for detecting breast masses. A simultaneous U-net model-based architecture for segmenting the breast lesion and a Convolutional Neural Network for classifying the breast lesions into benign or malignant are proposed. The proposed model is tested with the mammogram images taken from the publicly available database, Digital Database for Screening Mammography. It is compared with the pre-trained nets, AlexNet and ResNet50 and produced an accuracy value of 96%.

Plant Leaf Disease Detection Using Multiclass SVM

Mrs.Suriya.D [1]
Assistant Professor [1]
Sethu Institute of Technology

Abstract—In India, the country where the main source of income is from agriculture. Farmers grow a variety of crops based on their requirement.. Leaf diseases are mainly caused by bacteria, fungi, virus etc. Diseases are often difficult to control. Diagnosis of the disease should be done accurately and proper actions should be taken at the appropriate time. Image Processing is the trending technique in detection and classification of plant leaf disease. This work describes how to automatically detect leaf diseases. The given system will provide a fast, spontaneous, precise and very economical method in detecting and classifying leaf diseases. This paper is envisioned to assist in the detecting and classifying leaf diseases using Multiclass SVM cascaded classification technique.

Glaucoma Detection using Machine Learning

I. Sanjay Rajan [1],T. Venkatesh [2],P. Vimal Guru [3],Dr. M. Malathi [4]
U.G. Student [1, 2, 3], Professor & P.G. Head(CSE) [4]
Sethu Institute of Technology

Abstract—In Glaucoma is a silent thief of sight. Detecting glaucoma at early stages is almost impossible and presently there is no cure of glaucoma at later stages. Glaucoma represents one of the leading causes of irreversible vision loss as it affects the optic nerve fibers and astrocytes. Different automated glaucoma detection systems were thoroughly analyzed in this study. A detailed literature survey of preprocessing, feature extraction, Machine Learning (ML) techniques and data sets used for testing and training purpose was conducted.The system is developed the machine learning algorithm such as SVM for detecting the glaucoma and experimental results shows that some performance metrics such as accuracy, precision, recall, f1 score, sensitivity, confusion matrix.

IoT Infrastructure for Forest Fire Detection and Alerting System

R. Niranjana [1], Dr.V.Shunmugavel [2]
Assistant Professor [1], Professor [2]
Sethu Institute of Technology

Abstract—As human advances in technology, manmade and natural disasters are increasing exponentially. It is essential to protect our environment and nature. In this modern age, the technology can be used to provide a conducive environment to live by preventing the catastrophic failure. One such nature event is the forest fire. The objective of this work is to design an IoT based device with autonomic features embedded to detect the forest fire as early as possible and also to take speedy action before the fire destroys and spreads over a large area. The main aim of the system is to detect the fire and protect our entire system from fire related calamities.

Automated Digital Money Transaction Using Cryptography

Mrs.K.Rajalakshmi [1], Mrs.P.Mahalakshmi [2],Ms.S.Muthuselvi [3]
Assistant Professor [1, 2, 3]
Solamalai College of Engineering

Abstract—A rapid growth in Digital Transaction is seen in recent time throughout the world.With ever increasing popularity of online Fund transfer, online shopping, Debit orCredit card fraud and personal information security are major concerns forcustomers, merchants and banks specifically in the case of CNP (Card NotPresent). This proposed method deals with a new approach for providing limitedinformation only that is necessary for fund transfer during online Fund transferthereby safeguarding customer data and increasing customer confidence andpreventing identity theft. Digital payments are transactions that take place viadigital or online modes, with no physical exchange of money involved. This meansthat both parties, the payer and the payee, use electronic mediums to exchangemoney.With widespread Internet usage e-commerce became common way ofconducting business. Money transactions and payments online are an everincreasing trend. Unfortunately, problems in terms of security arise moreover. Mostof the potential consumers like better to abstain from online money transfer thanks to the privacy concerns. So as to strengthen the trust and gain their acceptance,security improvements are required. In order to strengthen the trust and gain theiracceptance, security improvements are required. At the same time, however,solution needs to be convenient, entailing ease of use and higher mobility.

AI based Deep Face Recognition for Non-Vaccinated Population Finder and Alert System

Mr.K.A.Mohammed Faiz [1], A.Manoj [2], R.KarthikRaj [3], G.Mayil Udaiyar [4]
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Sethu Institute of Technology

Abstract—Vaccinations are an important and effectivecornerstone of preventive medical care with significant healthbenefits. Vaccination is crucial to limit the pandemic spread ofSARS- CoV-2/COVID-19. The government has startedvaccination to prevent the continuous spread of coronainfection in India. Therefore, besides the development andsupply of vaccines, it is essential that sufficient individuals arewilling to get vaccinated, but concerning proportions of populations worldwide show vaccine hesitancy. However, itsoon became clear that to end the pandemic, we wouldhave to address another ubiquitous problem: the widespreadhesitancy toward or downright rejection of vaccination. Toachieve population immunity first we have to find the non-vaccinated population to this end, this project proposed an Aadhaar-based facial recognition system is used to find non-vaccination citizen and alert them using Artificial Intelligence.Deep learning in the form of Convolutional Neural Networks to perform the face recognition and seems to be anadequate method to carry out face recognition due to its highaccuracy. A CNN is a type of Deep Neural Network (DNN)that is optimized for complex tasks such as image processing,which is required for facial recognition. CNNs consist ofmultiple layers of connected neurons: there is an input layer, anoutput layer, and multiple layers between these two. In thecontext of the coronavirus disease pandemic, Aface recognition-based person‘s current vaccination status toprotect against COVID-19 can then be used for continuity ofcare or as proof of vaccination for purposes other than health care. Facial recognition technology along with the Aadhaar to authenticate people before entering into any kindsof service. This project provides COVID-19 vaccination statususing their face and attest that an individual has received avaccine or not and alert them to get vaccinated.

Pulmonary Carcinoma Detection by Histological Analysis

Anusha. L [1], Gayathri K [2] , Haritha G A [3] , Mr.K.A. Mohammed Faiz [4]
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Abstract — Lung disease identification based on analysis and processing of medical images is important to assist medical doctors during the diagnosis process. In this context, this paper proposes a new feature extraction method based on human tissue density patterns, namely Analysis of Human Tissue Densities in Lung Diseases. The proposed method uses human tissues radiological densities, in Hounsfield Units, to perform the features extraction on thorax computerized tomography images. We compared the proposed method against the Gray Level Co- Occurrence Matrix and Statistical Moments to accomplish the performance evaluation alongside four machine learning classifiers. Overall, the results revealed that the proposal achieved higher accuracy ratios while it took the lowest runtime in all performed experiments. Thus, we consider our proposal as a valid alternative to be used in real-time applications.

Form Helper for Zoho Books

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Abstract—Zoho Books is online accounting software that manages your finances, automates business workflows, andhelps you work collectively across departments. Online accounting software has many forms to fill which is an overheadto the user of the Zoho books. So we planned to build an extension for our product which help the Zoho books user to save there time in there daily work. like suggesting item to the specific customer, grouping items to a single group and adding it to the line item of the module, and auto form filling.

Secure Cloud Storage Scheme Using Fog Computing

P. Rupeshkumar [1], R.Venkateshkumar [2], B. Thamotharan [3], Mrs. T. Punitha [4]
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Abstract—The storage service is excellent unless usersoutsource their sensitive data to cloud storage server. Cloud server gets full access and control over user‘s data once datais outsourced to the cloud. It can read or search through theuser‘s data. Recently, fog server based three-layer architecturehas been presented for secure storage. In that architecture, theportion of data to be stored in cloud, fog and user‘s localmachine. Some portion of data in the cloud and theircustomized hash algorithm, take extra computation/storageoverhead, In this project, we create fog-based cloud storagescheme. In that scheme, data is splitted into multiple blocksthrough XOR-combination and combine this blocks into 2-blocksor 3-blocks using xor-operation. So using this scheme, weenhance the efficiency of fog based cloud storage service andimprove the security of fog server for a robust fog centric cloudcomputing infrastructure and we enhance cypto system to securedata without revealing any information from it.

Detection of Fraudsters Who Steal Financial Assets Using Ml Initiatives

Ms. S. Priyadharshini [1] , ,Mrs.S.Meenakshi [2]
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Abstract—Online social network have started to leverage virtual currency as an effective means to glue financial activities across various platforms such as online shopping, paid online games, and paid online reading. Users purchase virtual money using real currency at a regulated rate; one user can also transfer it to another user via various methods such as recharging their account and sending gifts. Virtual currency in OSNs plays an increasingly important role in supporting various financial activities such as currency exchange, online shopping, and paid games. Users usually purchase virtual currency using real currency. The attacks may not only introduce significant financial loss of victim users, but also harm the viability of the ecosystem. It is therefore of central importance to detect malicious OSN accounts that engage in laundering virtual currency. The behavior of both malicious and benign accounts based on operation data collected from Tencent QQ, one of the largest OSNs in the world. A system is devised with multi-faceted features that characterize accounts from three aspects: account viability, transaction sequences, and spatial correlation among accounts. To create a detection method by integrating these features using a statistical classifier, this can achieve a high detection rate.

Fake News Detection Using Machine Learning Techniques

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Abstract—Online social network have started to leverage virtual currency as an effective means to glue financial activities across various platforms such as online shopping, paid online games, and paid online reading. Users purchase virtual money using real currency at a regulated rate; one user can also transfer it to another user via various methods such as recharging their account and sending gifts. Virtual currency in OSNs plays an increasingly important role in supporting various financial activities such as currency exchange, online shopping, and paid games. Users usually purchase virtual currency using real currency. The attacks may not only introduce significant financial loss of victim users, but also harm the viability of the ecosystem. It is therefore of central importance to detect malicious OSN accounts that engage in laundering virtual currency. The behavior of both malicious and benign accounts based on operation data collected from Tencent QQ, one of the largest OSNs in the world. A system is devised with multi-faceted features that characterize accounts from three aspects: account viability, transaction sequences, and spatial correlation among accounts. To create a detection method by integrating these features using a statistical classifier, this can achieve a high detection rate.

Detection of Pesticides in Fruitsand Vegetables

S VarshaVardhini [1] ,V.Vijaya Lakshmi [2] , S Vishnu Vardhini [3] , Mr. S.Duraipandi [4]
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Abstract— Internet of Things technology has been identified as one of the emerging technologies which is widely used in all walks of life in the world. In this project we are using temperature sensor, gas sensor and moisture sensor to detect the conditions of the vegetables and we used the processor as Arduino UNO and Node MCU to connect with cloud. After we retrieve the data from cloud we are going to apply machine learning algorithm to predict the accurate output and intimates how it is harmful. Internet of Things technology has been identified as one of the emerging technologies which is widely used in all walks of life in the world. The IoT comprises such as Radio Frequency Identification Wireless sensor networks Global Positioning System, which is used for sensing, tracking, etc in environment management. With the help of Arduino and pest detection sensor is used for sensing the pests present in the fruits and vegetables in the market. With addition of that, the LCD is used for indicating the pests present in fruits and vegetables. The problem shows through LCD and make aware that How much Percentage is present in fruits and vegetables. Our goal is to identify whether the Pesticides are affected in fruits and vegetables or not with the help of computer vision and deep learning.

Intelligent Face Mask and BodyTemperature Detection Systems

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Abstract— In this pandemic situation, for monitoring the temperature of the human, another human is required for monitoring that temperature. This may cause covid-19 positive to those who monitor the temperature of the other humans. In-order to eliminate this disadvantage we have implemented a sensor that which automatically monitors the temperature of the human in certain range of the distance.. If the person‘s temperature is abnormal then, the gate will remains close and updated to the database. Our system has minimized the risk of spreading covid-19 to another person and identifies the person with abnormal temperature and doesn‘t allow them to pass through the gate passage. PC camera is turned on to check whether they have wearied mask or not. Once the mask abnormal found then the e-mail send to the admin with including of the picture. We can able to monitor the temperature with the help of Cayenne webpage. A face mask detection dataset consists of with mask and without mask images, we are going to use OpenCV to do real-time face detection from a live stream via our webcam. The people are without mask then Image are captured when send the email. We will use the dataset to build a COVID-19 face mask detector with computer vision using Python, OpenCV, and Tensor Flow and Keras. Our goal is to identify whether the person on image/video stream is wearing a face mask or not with the help of computer vision and deep learning.

Analysis of Mobile Application GENIE for Booking Home Services

J. Jency Jerline Sandra [1], G. Keerthana [2], and X. Leo Merlin [3], Mr.K.A.Mohammed Faiz [4]
U.G. Student [1, 2, 3], Assistant Professor [4]
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Abstract—People are buried up in a heavywork culture, as everyone is engaged with busy schedules, andhectic tasks which make them deviate from family life. If anyissues encounter unexpectedly, it distracts them and makesthem choose over the work they have to accomplish primarily.It is important to manage both professional and family life. Insuch circumstances, every one of us would have fantasizedabout a kind of house which doesn‘t have any leaks in pipes, ifit doesn‘t have any mess in fixing a furniture and a kind ofhouse which never face any maintenance issues and every oneof us have thought that a life would be much better if no pointof issue arises in getting a service at your door step and if thereis no mess in bargaining a labour for home service. In suchsituation‘s-Commerce plays a vital role in today‘s life as it hasso many advantages in our life because it makes convenient indaily life of the people. So, giving a thought to that aspect of life is to design and develop a system that provides many services at your doorstepin just one click. A System that provides variety of services likeplumbers, movers and packers, repair persons, cleaners,electricians, painters, taxi service laundry and many more. Tomake it comfortable for all the users our system also providesa mobile environment which offers ease in accessing ourservices. A very simple process is carried out to book aservice(s), and our system is specialized with providing aconfirmation email about the selected service. People canchoose the particularity of service required by uploading theimage of desired specification. System is versatile as service canbe booked from everywhere to anywhere you desire.
General Terms: - Services, Authentication, Customers,Registration

Botnet Attack Detection in IOT Network Using Hybrid Deep Learning

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Abstract— Deep Learning (DL) is an efficient method for botnet attack detection. However, the volume of network traffic data and memory space required is usually large. It is, therefore, almost impossible to implement the DL method in memory-constrained IoT devices. We reduce the feature dimensionality of large-scale IoT network traffic data using the dimensionality reduction techniques. Bot-IoT dataset is the most relevant dataset that is publicly available for network-based botnet attack detection in IoT networks. Millions of IoT botnet attack traffic samples were included in Bot-IoT. These attack traffic samples can be categorized into four IoT botnet scenarios, namely: DDoS, DoS, reconnaissance and information theft. Feature dimensionality reduction is mostly achieved by applying either linear or non-linear transformation technique to high-dimensional feature set. Principal Component Analysis (PCA) is one of the common linear transformation methods while kernel methods, spectral methods and DL methods employ non-linear transformation techniques. Auto encoder is an unsupervised DL method that produces latent-Space representation of input data at the hidden layer. Different auto encoder architectures have been proposed to reduce the feature dimensionality in most popular network intrusion datasets. Then, we have to implement the deep learning algorithms such asLong Short term Memory (LSTM) and Convolutional Neural Network. Finally, the experimental results shows that the performance metrics such as accuracy, precision, recall and confusion matrix.

Multi Image Watermarking Scheme Based on Intensity Analysis

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Abstract—A new robust multi image digital water marking scheme is proposed based colour channel and on pixels intensity in the carrier images. The colour image is divided into its three basic colour channels (Red, Green, and Blue). Each channel is treated as a host image and broken into segments of equal sizes. A histogram is drawn for each segment in these channels formulating the number of pixels against intensity. Each channel embeds one modulating image resulting into multi-water marked image. The channels are then re-integrated back to form the watermarked image. This technique is good for strong image authentication and authorized person who know key value can only get original image back. Hence, watermark bits values are distributed irregularly all over the carrier image making it extremely difficult to be noticed or extracted unless the key is known. Therefore, this method has proved to be very secure and robust against different types of noise, resizing and rotation.

An Effective Pre-Processing Technique Based on Discrete Linearization and Vignette Correction for Filtering and Enhancement of WCE Image

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Abstract—Wireless Capsule Endoscope (WCE) image is widely employed for small intestines inspections where it is impossible to use conventional endoscopic techniques. At WCE, the evaluation process must not be practiced constantly by physicians and practitioners. However, this is also a time-consuming procedure that can be cumbersome for physicians and human mistakes during the process. Hence, there is a need to automate the detection process. For this, preprocessing is an essential and initial step. The proposed system offers pre-processing mechanism for WCE image enhancement. WCE is employed for examining the human digestive tract so as to recognize the areas that are abnormal. Moreover, this is regarded as a challenging task for the recognition of abnormal areas like bleeding because of dark images and poor quality of WCE. In this approach, pre-processing is employed to ease the feature extraction process. Initially, distribution linearization and linear filtering process is employed. The image contrast is enhanced followed by image subtraction and vignette correction. At last, the de-correlation stretching is presented to attain de-noised and enhanced image. The performance analysis shows that the proposed system is better in offering enhanced and sharpened WCE image.

Grey and Color Medical Image Encryption Using a Digital Image Encryption Algorithm

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Abstract—Medical images are considered as one of the most important and sensitive data in Information systems. Sending medical images over the network requires a strong encryption algorithm such that it is resistant against cryptographic attacks. Among the three security objectives for the security of information systems namely confidentiality, integrity and availability, confidentiality is the most important aspect that need to be taken much care for the secure storage and transmission of medical images. There are different methods for securing images. One of the most efficient techniques for securing medical images is encryption. Confusion and diffusion are the two main steps used in encryption algorithms. The efficiency of our proposed method in encrypting medical images is evaluated using security analysis and time complexity. The security is tested in entropy, histogram differential attacks, correlation coefficient, PSNR, key space, and sensitivity. The achieved results show a high-performance security level reached by successful encryption of both grey and color medical images. A comparison with various encryption methods is performed. The proposed encryption algorithm outperformed the recent existing encryption methods in encrypting medical images.

Privacy Policy Inference of User-of Uploaded Images on Content Sharing Sites

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Abstract—With the increasing volume of images users share through social sites, maintaining privacy has become a major problem, as demonstrated by a recent wave of publicized incidents where users in advertently shared personal information. In light of these incidents, the need of tools to help users control access to their shared content is apparent. Toward addressing this need, we propose an Adaptive Privacy Policy Prediction (A3P) system to help users compose privacy settings for their images. We examine the role of social context, image content, and metadata as possible indicators of users‘ privacy preferences. We propose a two-level framework which according to the user‘s available history on the site, determines the best available privacy policy for the user‘s images being uploaded. Our solution relies on an image classification framework for image categories which may be associated with similar policies, and on a policy prediction algorithm to automatically generate a policy for each newly uploaded image, also according to users‘ social features. Over time, the generated policies will follow the evolution of users _privacy attitude. We provide the results of our extensive evaluation over 5,000 policies, which demonstrate the effectiveness of our system, with prediction accuracies over 90 percent.

An Improved LSTM Frame Work Covid- 19 Risk Prediction in Imbalance Bigdata

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Abstract—The onset of Corona virus disease has pushed the world into aserious jeopardizing situation and the infectious disease has already beenclassified by the World Health Organization as a pandemic. Thevirus has been categorized as severe acute respiratory syndrome .Coronavirus 2 due to its visual similarity to the SARS-CoV-1It is a highly contagious disease which spreads very rapidly and in order end the pandemic, the whole world is working with all its might. More recently, the data mining techniques have been proved to be useful in the disease prediction .The data mining techniques. The volume of clinical data is increasing every single day. It is difficult for human experts to extract information from the data by looking at them manually. In contrast, the data mining techniques can automatically extract information from the raw data.

Weed Identification Using Deep Learning and Image Processing in Vegetable Plantation

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Abstract— Weed identification in vegetable plantation is more challenging than crop weed identification due to their random plant spacing. So far, little work has been found on identifying weeds in vegetable plantation. Traditional methods of crop weed identification used to be mainly focused on identifying weed directly; however, there is a large variation in weed species. This paper proposes a new method in a contrary way, which combines deep learning and image processing technology. Firstly, a trained Center Net model was used to detect vegetables and draw bounding boxes around them. Afterwards, the remaining green objects falling out of bounding boxes were considered as weeds. In this way, the model focuses on identifying only the vegetables and thus avoid handling various weed species. Furthermore, this strategy can largely reduce the size of training image dataset as well as the complexity of weed detection, thereby enhancing the weed identification performance and accuracy. To extract weeds from the background, a color index-based segmentation was performed utilizing image processing. The employed color index was determined and evaluated through Genetic Algorithms (GAs) according to Bayesian classification error. During the field test, the trained Center Net model achieved a precision of 95.6%, a recall of 95.0%, and a F1 score of 0.953, respectively. The proposed index $-19R + 24G - 2B \geq 862$ yields high segmentation quality with a much lower computational cost compared to the wildly used ExG index. These experiment results demonstrate the feasibility of using the proposed method for the ground-based weed identification in vegetable plantation.

Community Detection in Social Networks Using Hash tag Recommendation

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Abstract - We propose a community-based hash tag recommendation framework, which studies hash tag through message similarity task and applies it on communities. The detected communities are extracted from four social network constructions based on mentioned topic. The performance of hash tag recommendation is the best when the communities are generated using strongly connected users from the network of users who share similar usage of topics.

Three Level Password Authentication Systems

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Abstract— Nowadays, we have known that computer security mostly depends on password to verify and authenticate users. There are many authentication schemes proposed and most of them are still have weaknesses. Some of them are based on the physical and behavioral properties of the user such as voice recognition, and some others are based on knowledge of the user such as textual and graphical passwords. However, these schemes are still not secure enough and allow attackers to steal the data easily. Moreover, users often use simple password that attackers can guess easily. Therefore, it needs something for secure and user-friendly authentication schemes to overcome this problem. In this project, the 3-level password authentication scheme to overcome the problem.

Illusion Pin Shoulder-Surfing Authentication Using Hybrid Images

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Abstract— A Personal Identification Number is a sequence of digits that confirms the identity of a person when it is successfully presented. The maturity of PIN authentication is a result of its continuous usage for years in a wide range of everyday life applications, like mobile phones and banking systems. PIN authentication is susceptible to brute force or even guessing attacks. IPIN uses the technique of hybrid images to blend two keypads with different digit orderings in such a way, that the user who is close to the device is seeing one keypad to enter her PIN, while the attacker who is looking at the device from a bigger distance is seeing only the other keypad. To overcome shoulder surfing attacks on authentication schemes by proposing Illusion PIN, a PIN-based authentication method that operates on touch screen devices. The user‘s keypad is shuffled in every authentication attempt since the attacker may memorize the spatial arrangement of the pressed digits. The visibility algorithm forms the core of our work and we would like to examine whether it can be used to assess the visibility of images other than hybrid keypads. Visibility algorithm could be used to assess the visibility of general images, but its parameters have to be appropriately tuned for the particular task at hand.

Pedometer Hero

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U.G. Student [1, 2, 3], Associate professor [4]
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Abstract—Obesity is a complex disease involving an excessive amount of body fat and results from inherited, physiological and environmental factors, combined with diet, physical activity, and exercise choices. Pedometer Hero is gaming software that tracks your steps, and shows the statistics of the user‘s calories intake and displays whether the calories intake should be more or less depending upon your weight goal. This health app is gamified with the help of integrated RPG game mechanics that allows the player to move depending on the steps taken in real life.

Blur Removal Image using Machine Learning

A.S.Arikesavan [1], S.Cheenu [2], S.A.Mohamed Halith [3], Dr. B.Guruprakash[4]
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Abstract- It is prevalent to adopt image deblurring techniques to recover quality images from blurry images. A common situation is capturing photos in dimly-lit environments (e.g., photographing moving objects in a night scene), where one can hardly get sharp and bright photos. Most likely, the taken photos are dark or blurry, depending on the camera settings and object conditions. Though a lower shutter speed can effectively increase brightness, it almost inevitably leads to blur. The Expectation Maximization algorithm is utilized to estimate the parameters of GMM. To preserve sharp features, we add an additional bilateral term to the objective function in the M-step. We eventually add a detail layer to the deblurred image for refinement. Extensive experiments on both synthetic and real-world data demonstrate that our method outperforms state-of-the-art techniques, in terms of robustness, visual quality, and quantitative metrics.

The Artificial Intelligence Privacy Protection in Cyberspace

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Abstract- With the growing processing power of computing systems and the increasing availability of massive datasets, along with novel concepts and architectures for deep learning, AI algorithms have led to major breakthroughs in many different areas including cyber security. Nowadays AI has become one of the key enablers to studying and addressing cyber security-relevant problems at large in several application domains such as for intrusion detection, malware detection and spam detection. However, it is important to consider that AI can be used also by attackers to continually improve their techniques and refine their offensive capabilities. Studying the effectiveness of AI is thus critical to ensure modern cyber security equipped to face the emerging threats allowed by malicious uses of AI. In this talk I will showcase several examples of recent progress in applying AI into cyber-threat detection problems and will provide a glimpse into exciting future directions that promise to have a profound impact on cyber security.

Supporting Privacy Protection in Personalized Web Search

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Abstract- Personalized web search (PWS) has demonstrated its effectiveness in improving the quality of various search services on the Internet. However, evidences show that users‘ reluctance to disclose their private information during search has become a major barrier for the wide proliferation of PWS. We study privacy protection in PWS applications that model user preferences as hierarchical user profiles. We propose a PWS framework called UPS that can adaptively generalize profiles by queries while respecting user-specified privacy requirements.

College Enquiry Chat Bot

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Abstract- User interfaces for software applications can come in a variety of formats, ranging from command-line, graphical, web application, and even voice. While the most popular user interfaces include graphical and web-based applications, occasionally the need arises for an alternative interface. Whether due to multi-threaded complexity, concurrent connectivity, or details surrounding execution of the service, a chat bot based interface may suit the need. Chat bots typically provide a text-based user interface, allowing the user to type commands and receive text as well as text to speech response. Chat bots are usually a stateful services, remembering previous commands (and perhaps even conversation) in order of provide functionality. When chat bot technology is integrated with popular web services it can be utilized securely by an even larger audience. This chatbot project is a College query website to be used by students who wants to get information related to college. The student enquiry Chatbot has the capacity to make friendly conversations; respond to course and faculty details; give the link for the academic calendar; answer the frequently asked questions; calculate the fees based on the students input; and give the timing, contact, address, and events information of the department like Union, library. To build the chatbot Php, CSS, Html platforms are used.

Concrete Wall Defect Identification Using Image Analysis

M Mathina Kani [1],Sakthivel B [2] , Saravanan M [3], Sanjay Kumar S [4]
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Abstract- Cracks on the concrete surface are one of the earliest indications of degradation of the structure which is critical for the maintenance as well the continuous exposure will lead to the severe damage to the environment. Manual inspection is the acclaimed method for the crack inspection. In the manual inspection, the sketch of the crack is prepared manually, and the conditions of the irregularities are noted. Since the manual approach completely depends on the specialist‘s knowledge and experience, it lacks objectivity in the quantitative analysis. So, automatic image-based crack detection is proposed as a replacement. The Non-Destructive crack by sub-block algorithm using pictures of crack and by finding the length and area of the crack. Depend upon the parameter estimation severity of the crack is identified.

Sentiment Analysis on Amazon Product Reviews With Stacked Neural Networks

Nivedha.C [1],Dr.M.Malathi[2],Mrs.S.Gospeline Christiana [3],Mr.M.G.Santhosh Raja[4], Mrs.K.Nagalakshmi[5]
P.G.Student[1], Professor & PG Head/CSE[2],Assistant Professor[3,4], Assistant Professor(S.G)[5]
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Abstract- Glaucoma is a chronic eye disease that results in loss of vision. It is highlyessential to identify the disease in time. In order to overcome the difficulties, anautomated diagnosis of glaucoma methods is preferred for glaucoma diagnosis. The extraction of robust features is playing an important role in developing a robustsystem. The former techniques are expensive and require experienced clinical personsto use them. So, there is a need to diagnose glaucoma accurately with low cost. Hence,in this proposed system we implement the new technique in which the EmpiricalWavelet Transform is applied on the images to form the Sub band which is also calledas the decomposed images. Then from the decomposed image Correntropy featuresare obtained. These extracted features are normalized based on the feature values byfeature selection process. Then, these features are used for the classification of normaland glaucoma images LS-SVM (Least Squares Support Vector Machine) classifier.After the classification process the performance of the system is evaluated by usingthe Performance measure values such as Accuracy, Sensitivity, Specificity. And theseperformance results show that the proposed system which shows the better results than the Existing systems.

Retinal Image Segmentation Using Shearlet Transform Features and Classification via VGG 19

M.Atchuthan [1], Mrs.S.Gospeline Christiana [2],Dr.M.Malathi[3], Mr.M.G.Santhosh Raja[4],Mrs.K.Nagalakshmi[5]
P.G.Student [1], Professor & PG Head/CSE [3], Assistant professor Prof [2, 4], Assistant Professor (S.G) [5]

Abstract- Retinal vessel segmentation is considered as a major concern for the detection of several retinal disease, at which the manual segmentation is a tedious one. Thus, automatic segmentation of those vessels could aid better diagnosis of retinal disease. As there were several researches carried out on the automatic mechanism for retinal disease, there were some limitations like lower accuracy, reduced prediction rate and so on. An effective CNN based classification technique is employed for the classification and detection of diabetic disease in retinal image. The input dataset is pre-processed by the extraction of green channel with enhancement of image using histogram-based approach followed by filtering to remove noise. The vessel extraction is made using thresholding approach. The pre-processed image is then segmented using Shearlet segmentation algorithm. From the segmented image, the features are extracted by GLCM technique followed by PCA for feature selection algorithm. The selected features are classified and the abnormality is detected. At last, the performance analysis is carried out and is compared with existing techniques to prove the effectiveness of proposed mechanism. The three publicly available DRIVE, STARE and CHASE_DB1 databases are used for performance evaluation.

Bayes Shrinkage and Fused Wavelet Transform with Autoencoder based Deep Learning Approach for Magnetic Resonance Image Denoising

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Abstract- Denoising medical images is of great concern as it plays a significant role in the performance ofcomputer-aided diagnosis (CAD) systems. In real-life scenarios, various conditions like the vibration of magnetic coils due to rapid pulses of electricity contribute to noise during the procurement of medical images such as magnetic resonance imaging (MRI), computed tomography (CT), and ultrasound. The use of imaging modality depends on the type of disease and its severity, and MRI is the most commonly employed imaging modality for most recent medical diagnoses. However, MRI is prone to certain noises such as Gaussian and Rician making denoising one of the important steps in the CAD system. Traditional approaches used for denoising of MRI were prone to certain issues such as loss of data due to compression and preservation of edge details. Hence, this paper presents Bayes shrinkagebased fused wavelet transform (BSbFWT) and Block based autoencoder network (BBAuto-Net) for removal of noise from MRI. Further, the performance analysis of the denoising approaches will be performed using different metrics. Thus, the values of peak signal-to-noise ratio (PSNR), mean squared error (MSE), structural similarity index metric (SSIM), and mean absolute error (MAE) for proposed BB-Autonet are expected to be outstanding for combined Gaussian and Rician noise.

Offline Signature Verification System

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Abstract- Signature continue to be an important biometric for authenticating the identity of human beings. This Image processing project presents an effective method to perform Off-line signature verification using unique structural features extracted from the signature‘s contour. A novel combination of Modified Direction Feature (MDF) and additional distinguishing features such as the centroid, baseline area, length and skew are used for classification. This project involves the design and development of an efficient signature identification system. The pattern recognition algorithm designed for this project is based on general architecture of signature identification system. The motivation behind the project is the growing need for a full proof signature verification scheme which can guarantee maximum possible security from fake signatures.

Optimal Framework for the Detection of the Credit Card Fraud System

Suriya Dileepan[1],I. Syed Gulam Musthafa[2],A. Vignesh Kumar[3], Dr. E. Sivajothi[4], M.Mathina Kani[5]

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Abstract- Now a days , the usage of credit cards has dramatically increased. As credit card becomes the most popular mode of payment for both online as well as regular purchase, cases of fraud associated with it are also rising. In this project, we model the sequence of operations in credit card transaction processing can be used for the detecting the frauds. A fraud detection system (FDS) is initially trained with the normal behavior of a cardholder. If an incoming credit card transaction is not accepted by the trained FDS with sufficiently high probability, it is considered to be fraudulent. At the same time, we try to ensure that genuine transactions are not rejected. We present detailed experimental results to show the effectiveness of our approach and compare it with other techniques available in the literature. This model is developed under the algorithm of Hidden Markov Model (HMM). Which does not require fraud signatures and yet is able to detect frauds by considering a cardholder‘s spending habit. Card transaction processing sequence by the stochastic process of an HMM. The details of items purchased in Individual transactions are usually not known to any Fraud Detection System (FDS) running at the bank that issues credit cards to the cardholders. Hence, that feel that HMM is an ideal choice for addressing this problem. Another important advantage of the HMM-based approach is a drastic reduction in the number of False Positives transactions identified as malicious by an FDS although they are actually genuine. An FDS runs at a credit card issuing bank. Each incoming transaction is submitted to the FDS for verification. FDS receives the card details and the value of purchase to verify, whether the transaction is genuine or not. The types of goods that are bought in that transaction are not known to the FDS. It tries to find any anomaly in the transaction based on the spending profile of the cardholder, shipping address, and billing address, etc. If the FDS confirms the transaction to be of fraud, it raises an alarm, and the issuing bank declines the transaction

Intelligent Helmet for Miners using IOT

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Abstract- Disaster may be manmade or artificial one we can‘t avoid it but we can prevent it by some advance technology one disaster is disaster in mines we created is intelligent helmet for miners. In this we created a intelligent sensing and warning to the workers it and also map the current location of workers, GPS module is used. It will detect Methane gas with the help of MQ- 4 sensor is used. The measured values were acquired wirelessly through the Wi-Fi module of the Node MCU (ESP8266), as programmed via the Arduino IDE. Disasters in underground mines are very serious issues nowadays. The safety of the underground mines would be considered a serious issue. IoT technology is used to prevent the miners from accidents. In our proposed system, we have developed a better communication technology which has to be employed for an intelligent sensing and warning system.

Scalable and Secure Sharing of Personal Health Records In Cloud Computing Using Attribute Based Encryption

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Abstract- In recent years, personal health record (PHR) has emerged as a patient-centric model of health information exchange. A PHR service allows a patient to create, manage, and control her personal health data in one place through the web, which has made the storage, retrieval, and sharing of the medical information more efficient. Especially, each patient is promised the full control of her medical records and can share her health data with a wide range of users, including healthcare providers, family members or friends. Due to the high cost of building and maintaining specialized data centers, many PHR services are outsourced to or provided by third-party service providers, for example, Microsoft HealthVault1.

Liver Tumor Detection Using Machine Learning

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U.G. Student[1,2,3], Assistant Professor[4]
Sethu Institute of Technology

Abstract- Liver diseases are becoming one of the most fatal diseases in several countries. Patients with Liver disease have been continuously increasing because of excessive consumption of alcohol, inhale of harmful gases, intake of contaminated food, pickles and drugs. Liver patient datasets are investigate in building classification models in order to predict liver disease. This dataset has been used to evaluate prediction algorithms in an effort to reduce burden on doctors. In this proposed work as checking the whole patient Liver Disease using Machine learning algorithms. In CT scan images by that it can‘t find the microorganisms over the liver by thresholding. It can find only the max and min values of segregation and for extracting the image used Discrete cosine transform and classified by Support vector machine the extraction not be in proper and accuracy low. Chronic liver disease refers to disease of the liver which lasts over a period of six months. So in that, it will get take results of how much percentage patients get disease as a positive information and negative information. Using classifiers, it will be processing Liver Disease percentage and values are showing as a confusion matrix and proposed a various classification scheme which can effectively improve the classification performance in the situation that training dataset is available. In process will get all that details from there. Then it will be concided good and bad values are using machine learning classifier. Thus outputs shows from proposed classification model indicate that Accuracy in predicting the result.

Machine Learning Based Non Live Finger Print Detection

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Mrs.Y.SharmilaBegum[3], Research Scholar, Anna university, Regional campus, Madurai ,

Abstract— In recent days, liveness detection of finger print image has become very essential in finger print recognition systems because fake finger prints are used in lieu of real finger prints. Many Machine learning (ML) techniques have been widely used for non live finger print image detection because these techniques provide high accurate identification and also cost effective. These techniques also enhance the accuracy of classification of real and spoof finger print images. In this article, literature review is done about machine learning (ML) and its algorithms used for the detection of non live finger print. The main objective of this article is to compare and analyse various ML techniques used for spoof detection. It also provides an overview of performance merits and limitations of ML algorithms used in non live finger print detection.

Fire Detection System Using Computer Vision

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UG student[1,2], Assistant Professor[3,4]

Abstract- The project aimed to detect fire by using the image processing technology that will alert people by early detection of fire. As there are many automatic fire alarm systems already existed like the sensor method that has some limitations and designed to sense fire with the smoke, limited areas. To reduce limitations and to optimize with new technology, the project is proposed fire detection is the main objective of this project besides surveillance. The aim of the project is to early detection of fire apart from preventive measures to reduce the losses due to hazardous fire. The project mainly is based on image processing In this project, at the user end, the fire images will be feeded in the form of video frames. These images will be further processed by using the software, Python. Fire is a flame,whether it is small or large, an undesirable place, situation and time. In general, every place has the potential to experience a fire. In this paper, an image-based fire alarm system is designed, using a laptop and webcam as the main equipment there isa camera for the surveillance. This camera will give a real-time video output to the user on the laptop or computer via a small GUI-graphic user interface which is to be built in PYTHON using OPENCV. Thus the fire will be detected using this model. This project can also be served for security and surveillance applications. The entire code is written in pure python language using the openCV library for imageprocessing.Thetheoreticalpartsemphasizemoreincomputervision, machine learning, image processing, color model, and the working algorithm of the project to detect the fire. The project gives a better understanding of object detection with the computer and the use of these technologies in different form sand uses.

IoT based Smart Food Cooling System on Wheels

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Ms. S. Esthar [2], Research Scholar, Chikkanna Government Arts College
Ms. S. Jocelyn Belinda [3], U.G. Student, Sethu Institute of Technology

Abstract— –You are what you eat, so don't be fast, cheap, easy, or fake.‖ This is a well-known proverb that is used all across the world. Food is a necessity for all life and cannot be lived without. Eating healthfully lowers the risk of physical health issues like diabetes and heart disease. It also benefits your general health, energy levels, and sleeping habits. The nutrients our bodies require to maintain their health and keep their energy are found in healthy diets. The main components that make up a healthy, balanced diet include water, carbs, fat, protein, vitamins, and minerals. Have you ever wondered how food is prepared and processed? Between the actual harvest and the time, the product is delivered to the buyer, there are numerous actions that must be taken. The food processing industries are alone responsible for these crucial preservation and maintenance operations. A robust and vibrant food processing industry is essential for reducing the loss of perishable agricultural products, extending the shelf life of food items, ensuring the value addition of agricultural products, commercializing and diversifying agriculture, creating jobs, and raising farmer income. The suggested concept offers solutions to transport food goods under the required climatic conditions by offering affordable refrigeration systems along with the tools needed to maintain and monitor them. The driver's health should also be taken into consideration because the entire profit depends on the transported good. We are utilizing a sensor-based methodology to keep track of the individual's health. The planned technology will bring about a new revolution in the ways that food is transported.

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Forecasting Flight Delays Prediction Using Machine Learning Models

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U.G. Student [1,2,3] , Professor & HOD/IT[4]
Sethu Institute of Technology

Abstract— With the improvement of the common avionics transportation industry as of late, the volume of common aeronautics transportation has expanded. Flight delay is a significant issue in the flying area. During the most recent twenty years, the development of the avionics area has caused air gridlock, which has caused flight delays. Flight delays additionally cause huge misfortunes for aircrafts working business flights. In this way, they do all that could be within reach in the anticipation or evasion of deferrals and undoing of trips by going to certain lengths. The model considers complex factors, for example, the flight volume, the arranged takeoff time and appearance time, the real departure time and appearance time, flight credits, air terminal and city atmospheric conditions, and so on.

Myocardial Infarction Prediction Using Machine Learning

B Vigneshbabu[1] , M Vignesh Sugadev[2] , S Yogesh Pandian[3], Dr. M Poomani @ Punitha [4]
U.G. Student [1,2,3] , Professor & HOD/IT[4]
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Abstract— Myocardial Infarction is likewise called Heart assault, and is the main source of death on the planet throughout the course of recent years. To decrease the quantity of passings from heart illnesses we utilize speedy and effective discovery strategies. Here we are utilizing AI calculations to foresee coronary illness utilizing the information of patients. AI is utilized across many reaches all over the planet. The medical services industry is no special case. AI can assume a fundamental part in foreseeing presence/nonattendance of locomotors messes, Heart sicknesses and that the beginning. Such data, whenever anticipated well ahead of time, can give significant instincts to specialists who can then adjust their determination and managing per patient premise. We work on foreseeing conceivable Heart Diseases in individuals utilizing Machine Learning calculations. In this task we play out the relative examination of classifiers like Decision tree, Naive Bayes, Logistic Regression, and SVM and we propose a group classifier which perform half and half arrangement by taking solid and powerless classifiers since it can have numerous number of tests for preparing and approving the information so we play out the examination of existing classifier and proposed classifier which can give the better precision and prescient examination.

Weed Detection Using Image Processing

Sneka.D[1] , Swathi.B[2] , Shivani.S[3] , Mrs.P.PabithaMuthu[4]
U.G. Student [1,2,3] , Assistant Professor[4]
Sethu Institute of Technology

Abstract— Agriculture is one of the origins of human sustenance in this world. Nowadays due to growing population we need the greater productive capability of the agriculture to meet the demands. In olden days, people used natural methods to increase the productivity, such as using the cow dung as a fertilizer in the fields. That resulted in an increase in the productivity enough to meet the requirements of the population. But later people thought of earning more profits by getting more outcome. So, there came a revolution called ―Green Revolution‖. After this period usage of deadly poisons as herbicides has increased to a drastic level. By doing so we got success in increasing the productivity but we have forgotten the damage done to the environment, which will raise a doubt in our sustenance on this beautiful earth. So, in this project, we have implemented some methods to reduce the usage of herbicides by spraying them only in the areas where weed is present. In this paper, we have implemented image processing using MATLAB to detect the weed areas in an image we took from the fields. In recent years, as the world population growth, existing land and natural resources decreased, the precision agriculture is increasingly capturing more attention of the researchers. Image processing approaches could be applied to solve this problem.

PROGRAM EDUCATIONAL OBJECTIVES

- Graduates will Practice as Competent Computer Engineers by exhibiting the state of the art technical skills to cater to the needs of the industries.
- Graduates will lead the team and function in a team of multi-cultural professionals with effective interpersonal skills.
- Graduates will hone their professional expertise engaging in research and sustained learning activities.

PROGRAMME OUTCOMES	
(1)	Apply the knowledge of mathematics, basic sciences, engineering fundamentals, and Computer Science and Engineering to the solution of complex engineering problems. **(Engineering Knowledge)**
(2)	Identify, formulate, and analyze complex problems requiring computing solutions to reach substantiated conclusions using principles of mathematics, basic sciences, and Computer Science and Engineering. **(Problem analysis)**
(3)	Design solutions for computer applied complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. **(Design/development of solutions)**
(4)	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions. **(Conduct investigations of complex problems)**
(5)	Select and apply appropriate techniques, resources, and modern IT tools including prediction and modeling to computing related complex engineering activities with an understanding of the limitations. **(Modern tool usage)**
(6)	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional computer science and engineering practice. **(Engineer and society)**
(7)	Understand the impact of the professional computer science and engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. **(Environment and sustainability)**
(8)	Apply ethical principles and commit to professional ethics and responsibilities and norms of the computer science and engineering practice. **(Ethics)**
(9)	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. **(Individual and team work)**
(10)	Communicate effectively on complex computer science and engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. **(Communication)**
(11)	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage cost effective projects in multidisciplinary environments.**(Project management and finance)**
(12)	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. **(Life-long learning)**


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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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This is to certify that Dr. / Mr. / Ms. JANANI.V, LOGESHWARI.L, PRIYADHARSHINI.V, PREMALATHA.P *of* SRI RANGANATHAR INSTITUTE OF ENGINEERING AND TECHNOLOGY *has actively participated in the International Conference On "**EMERGING TRENDS IN INFORMATION & COMMUNICATION TECHNOLOGIES**" Organized by the Department of Electronics & Communication Engineering of Sethu Institute of Technology and International Federation of Interdisciplinary Research and Issuance (IFIRI) held during **28th & 29th May 2022.***

Title of the paper : DESIGN OF INTELLIGENT HUMANOID ROBOT USING EVOLUTIONARY ALGORITHM

Co-Author(S) : SILAMBARASAN.D

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