

BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING, KOLHAPUR

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DTE INSTITUTE CODE: EN-6288 Dr. Vijay Ghorpade Tel.No.: (0231) 2638893, 2638894, Fax: 2636050 M.E., Ph. D. (Computer)

Criterion III: - Research, Innovations and Extension

3.3 Research Publications and Awards 2020



Sr. No.	Title of the paper	ISBN	Name of Author	Page No.
1	IoT Enabled Detection of Suspicious Human Behavior for ATM Environment	978-981-15-3124-8	Dr. V.R. Ghorpade	3

PRINCIPAL

2	Diagnosis of Epileptic Seizure a Neurological Disorder by Implementation of Discrete Wavelet Transform Using Electroencephalograph y	978-981-15-3992-3	Mr. S. S. Pawar	5
3	Efficient framework for soybean leaf disease detection and classification using machine learning algorithm	9783-3-030-51859-2	Dr.S.B.Jadhav	7
4	Classification of soybean diseases using pre-trained deep convolution neural networks	978-3-030-51859-2	Dr.S.B.Jadhav	9
5	Understanding Textile Antenna by Reviewing and Simulating it for High Data Rates Applications	978-981-15-5029-4	Mr. A.R. Kittur	11
6	Study of Recent Web Service Recommendation Methods	978-1-7281-4168-8	Ms. Pandharbale P.B.	13

Lecture Notes in Electrical Engineering 643

Vinit Kumar Gunjan · Sabrina Senatore · Amit Kumar · Xiao-Zhi Gao · Suresh Merugu *Editors*

Advances in Cybernetics, Cognition, and Machine Learning for Communication Technologies



IoT Enabled Detection of Suspicious Human Behavior for ATM Environment

Vaishnavi R. Mali [™], Anil R. Surve & V. R. Ghorpade

Chapter | First Online: 29 April 2020

387 Accesses

Part of the Lecture Notes in Electrical Engineering book series (LNEE, volume 643)

Abstract

Nowaday's security is the main thing in all industries. The most serious thing facing the industries which provide financial services and the retail markets is ATM physical attack. The industry which provides financial services and the retail markets lose their lots of money due to physical attack. Today, however, ATMs give a considerable measure of administrations to the clients; they are still dominatingly utilized for their essential capacity of pulling back cash. ATM security is the main issue that has been addressed in the proposed work by studying current scenarios where the traditional way is to take actions after an attack has occurred. But using the CCTV cameras present in the ATM we can prevent these attacks from happening. We can take actions before an incident is going to happen. The proposed system is an attempt to analyze the human in the ATM with the various parameters mentioned in this paper and send alert to the respective entity utilizing IOT platforms if he/she found suspicious. So that actions can be taken before the loss.

Lecture Notes in Electrical Engineering 656

J. Jayakumari George K. Karagiannidis Maode Ma Syed Akhter Hossain *Editors*

Advances in Communication Systems and Networks

Select Proceedings of ComNet 2019



Diagnosis of Epileptic Seizure a Neurological Disorder by Implementation of Discrete Wavelet Transform Using Electroencephalography

Conference paper | First Online: 14 June 2020

400 Accesses **1** Citations

Part of the Lecture Notes in Electrical Engineering book series (LNEE, volume 656)

Abstract

Abnormality and presence of neurological brain disorder such as epileptic seizure is diagnosed by analyzing electroencephalography signals accurately. The acquired brain signals are analyzed in time–frequency domains by using wavelet for accurate diagnosis. The online standard EEG database signal is preprocessed to remove power noise and most important eye blink artifact using independent component analysis. Daubechies wavelet is implemented, and decomposition of frequency is carried out up to eight levels. The exact sub-band of frequencies are extracted from band of frequencies which are called as delta band, theta band, alpha band, beta band and gamma band from lower to higher. Suitable features such as Lacunarity, Fluctuation Index, Energy and Entropy, Kolmogorov Entropy, Kurtosis and Skewness are extracted and classified using K-Nearest Neighbor, Support Vector Machine and

Drobabilistic Noural Notwork Dorformanco analysis is carried out by measuring enecificity

Advances in Intelligent Systems and Computing 1200

Joy long-Zong Chen João Manuel R. S. Tavares Subarna Shakya Abdullah M. Iliyasu *Editors*

Image Processing and Capsule Networks

ICIPCN 2020



Efficient Framework for Identification of Soybean Disease Using Machine Learning Algorithms

<u>Sachin Jadhav</u> [™], <u>Vishwanath Udupi</u> & <u>Sanjay Patil</u>

Conference paper | First Online: 24 July 2020

557 Accesses 1 Citations

Part of the Advances in Intelligent Systems and Computing book series (AISC, volume 1200)

Abstract

This paper exhibits the detection and classification framework of soybean leaflet diseases. Identification and classification were performed utilizing an k-means algorithm and a multiclass support vector machine (SVM). Healthy and unhealthy leaflets infected by frogeye leaf spot, bacterial blight, and Septoria brown spot diseases were collected from a soybean field. The image database is developed by acquiring images with a constant background using a digital camera under the control environment. The image preprocessing techniques applied to the ROI of the raw image. After that, the partition of the diseased region is done using an k-means segmentation technique. The color and texture features were extracted from the segmented leaf region. The mean and standard deviation of RGB channels estimated to extract color features, and texture features were extracted using a (GLCM) method to define an image

Advances in Intelligent Systems and Computing 1200

Joy long-Zong Chen João Manuel R. S. Tavares Subarna Shakya Abdullah M. Iliyasu *Editors*

Image Processing and Capsule Networks

ICIPCN 2020



Classification of Soybean Diseases Using Pre-trained Deep Convolutional Neural Networks

<u>Sachin Jadhav</u> [™], <u>Vishwanath Udupi</u> & <u>Sanjay Patil</u>

Conference paper | First Online: 24 July 2020

568 Accesses **2** Citations

Part of the <u>Advances in Intelligent Systems and Computing</u> book series (AISC, volume 1200)

Abstract

In this work, a novel soybean leaf disease classification technique related to pre-trained GoogleNet deep convolutional neural networks (CNN) architecture proposed. The proposed GoogleNet architecture trained on a database of 550 image samples of unhealthy and healthy soybean leaflets with 3 symptoms of an unhealthy class particularly, septoria brown spot, bacterial blight, frogeye leaf spot, and 1 healthy class using a deep transfer learning approach. As specified 3 unhealthy class and 1 healthy class identification, we have used the 5-fold cross-validation approach, the intended pre-trained GoogleNet-CNN architecture attains an accuracy of 96.25%. It was found that the accuracy of our proposed CNN architecture is enormously more precise than the formal machine learning models. The results of performance analysis to the recognition of soybean diseases exhibit the expediency and highest success rate using the proposed GoogleNet CNN model.

Advances in Intelligent Systems and Computing 1163

P. Suresh · U. Saravanakumar · Mohammed Saleh Hussein Al Salameh *Editors*

Advances in Smart System Technologies

Select Proceedings of ICFSST 2019



Understanding Textile Antenna by Reviewing and Simulating It for High Data Rates Applications

Asit Kittur & G. Vairavel

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Conference paper | First Online: 30 August 2020

511 Accesses

Part of the <u>Advances in Intelligent Systems and Computing</u> book series (AISC, volume 1163)

Abstract

In the proposed study, different wearable antenna papers are studied, and their detailed analysis is done. The conclusion of the survey and demonstration of future work is analyzed. While going through the study, different substrate materials and conducing materials along with their permittivity are also studied. For beginners, design calculations are also given. Different antennas with different band and shape with different textile materials and different frequency are studied. Finally, for this study, fractal antenna for different shape and different frequency is simulated.



