Criteria 3: Research, Innovation, Extension

Key Indicator 3.3 Research Publication and Awards

3.3.3 - Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

Note:

For all 224 publication details during last five years kindly click on the web-link : WEB LINK

Sample 58 publication details are as follows:

Sample Publications for Academic Year : 2020-21							
No.	**Title of the book/book-chapters / papers**	**Name of the author/s**	**Department**	**Publisher**	**ISBN with Book/Paper Content Proof**	**Web Link**	**Page No**
1	Autonomous Vehicle Simulation Using Deep Reinforcement Learning	Dr. Nupur Giri	Computer Engineering	Springer, Singapore	Online ISBN: 978-981-15-7106-0 Print ISBN:978-981-15-7105-3	Paper Link	13
2	Detection Of Dyscalculia Using Machine Learning	Dr. Nupur Giri	Computer Engineering	IEEE	Electronic ISBN:978-1-7281-5371-1 DVD ISBN:978-1-7281-5370-4 Print on Demand(PoD) ISBN:978-1-7281-5372-8	Paper Link	18

3	Ensuring Security and Privacy in IoT for Healthcare Applications	Dr. Anjali Yeole	Computer Engineering	(Scrivener Publishing)Wiley	Print ISBN:9781119711087 |Online ISBN:9781119711308 |DOI:10.1002/9781119711308	Paper Link	19
4	Size Invariant Ship Detection Using SAR Images	Dr.Shalu Chopra	Information Technology Engineering	Springer, Singapore	Online ISBN: 978-981-33-4968-1 Print ISBN: 978-981-33-4967-4	Paper Link	23
5	Consumer Behavior Analysis using Machine Learning Algorithms	Dr.(Mrs.) M.Vijayalakshmi	Information Technology Engineering	IEEE	Electronic ISBN:978-1-7281-6828-9 Print on Demand(PoD) ISBN:978-1-7281-6829-6	Paper Link	28
6	Snake Species Identification and Recognition	Mr.Mrugendra Vasmatkar	Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-7281-8993-2 Print on Demand(PoD) ISBN:978-1-7281-8994-9	Paper Link	29
7	Optimal Bipolar Lead Placement in Electrooculography (EOG): A Comparative Study with an Emphasis on Prolonged Blinks	Mrs.Sangeetha Prasanna Ram	Instrumentation Engineering	IEEE	Electronic ISBN:978-1-7281-6851-7 Print on Demand(PoD) ISBN:978-1-7281-6852-4	Paper Link	30
8	Application of Extension of Unscented transformation technique to nonlinear case of error propagation	Mrs.Sangeetha Prasanna Ram, Dr.Jayalekshmi Nair, S Ganesan	Instrumentation Engineering	IEEE	Electronic ISBN:978-1-7281-2813-9 Print on Demand(PoD) ISBN:978-1-7281-2814-6	Paper Link	31
9	A Survey on Recent Advances in Cyber Assault Detection using Machine Learning and Deep Learning	Mrs.Shoba Krishnan, Dr.Nadir N. Charniya, Piyusha Pakhare	Electronics and Telecommunications	Springer, Singapore	Print ISBN:978-981-15-9650-6 Online ISBN:	Paper Link	32

			Engineering		978-981-15-9651-3		
10	Artificial neural network-based Detection of Diabetes and its Effects on Vision- A survey	Dr.Ramesh K. Kulkarni, Akanksha U. Naik	Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-7281-5371-1 DVD ISBN:978-1-7281-5370-4 Print on Demand(PoD) ISBN:978-1-7281-5372-8	Paper Link	37
11	Convolutional Neural Network for Diabetic Retinopathy Detection	Dr.Ranjan Bala Jain,Shital Firke	Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-7281-9537-7 DVD ISBN:978-1-7281-8381-7 Print on Demand(PoD) ISBN:978-1-7281-9538-4	Paper Link	38
12	Sentiment Analysis using Deep Learning - A survey	Dr.Shalu Chopra; Dr.M.Vijayalakshmi; Sneha Sukheja	Information Technology Engineering	IEEE	Electronic ISBN:978-1-7281-5830-3 Print on Demand(PoD) ISBN:978-1-7281-5831-0	Paper Link	39
13	Design and construction of programmable time-to-amplitude converter	Dr. P.P Vaidya, Mrs. Kanchan Chavan, Aishwarya Salvi	Instrumentation Engineering	IEEE	Electronic ISBN:978-1-7281-5518-0 DVD ISBN:978-1-7281-5517-3 Print on Demand(PoD) ISBN:978-1-7281-5519-7	Paper Link	40
14	Cancer Cell Detection using 2D Photonic Crystal	Dr. Ranjan Bala Jain	Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-7281-4635-5 Print on Demand(PoD) ISBN:978-1-728	Paper Link	41

					1-4636-2		
Sample Publications for Academic Year : 2019-20							
1	Disease Migration, Mitigation, and Containment: Impact of Climatic Conditions & Air Quality on Tuberculosis for India	Dr. Nupur Giri	Computer Engineering	IEEE	Electronic ISBN:978-1-7281-4365-1 CD:978-1-7281-4364-4 Print on Demand(PoD) ISBN:978-1-7281-4366-8	Paper Link	43
2	Distributed Computing(Book)	Dr. Nupur Giri	Computer Engineering	Star Edu Solutions	ISBN:978-93867 65376	Book Link	44
3	Dyscalculia Detection using Machine Learning	Mrs.Sharmila Sengupta	Computer Engineering	Springer, Cham	Online ISBN: 978-3-030-34869 -4 Print ISBN: 978-3-030-34868 -7	Paper Link	46
4	Information analysis of Ophthalmic sonographic reports using NLP	Mrs.Sharmila Sengupta	Computer Engineering	ANVI BOOKS & PUBLISHERS	ISBN:978-81-94 1281-9-9	Paper Link	51
5	Internet of Everything(Book)	Dr. Anjali yeole	Computer Engineering	StarEdu Solutions	ISBN-13 : 978-9386765703	Book Link	52
6	IoT Sensor and Deep Neural Network based Wildfire Prediction System	Mrs. Vidya Zope	Computer Engineering	IEEE	Electronic ISBN: 978-1-7281-4876 -2 DVD ISBN: 978-1-7281-4875 -5 Print on Demand(PoD) ISBN: 978-1-7281-4877 -9	Paper Link	54
7	Protection of Mangrove Forest using image processing techniques	Ms. Kajal Jewani	Computer Engineering	IEEE	Electronic ISBN:978-9-380 5-4434-2 DVD ISBN:978-93-80 544-32-8 Print on Demand(PoD) ISBN:978-1-538 6-9271-4	Paper Link	55

8	Computation of strain in deformed pearlitic steel using digital image correlation technique	Mrs. KavitaTewari, R. K. Kulkarni	Electronics Engineering, Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-7281-2386-8 Print on Demand(PoD) ISBN:978-1-7281-2387-5	Paper Link	56
9	IoT based Autonomous Tunnel Electrical Cable Fault Detection and Maintenance Robot	Dr. Asawari Dudwadkar	Electronics Engineering	IEEE	Electronic ISBN:978-1-7281-2386-8 Print on Demand(PoD) ISBN:978-1-7281-2387-5	Paper Link	57
10	Design of a Universal Partial Discharge Simulator	Dr.Prakash P. Vaidya	Instrumentation Engineering	IEEE	Electronic ISBN:978-1-7281-4331-6 USB ISBN:978-1-7281-4330-9 Print on Demand(PoD) ISBN:978-1-7281-4332-3	Paper Link	58
11	Biomedical Electronics: Approaches And Implementations	Prof. Abhay Kshirsagar	Electronics Engineering	Amazon Kindle E-Book	ASIN : B088N8FSM7	Book Link	59
12	Image Processing Techniques for Analysing Food Grains	Dr.Chandan Singh Rawat; Harpreet Singh; Dharmesh Verma	Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-5386-7808-4 DVD ISBN:978-1-5386-7807-7 Print on Demand(PoD) ISBN:978-1-5386-7809-1	Paper Link	61
13	Person Re-identification from Videos using Facial Features	Dr.Nadir N.Charniya, Ankit R. Hendre	Electronics and Telecommunications Engineering	Springer, Cham	Online ISBN: 978-3-030-38040-3 Print ISBN: 978-3-030-38039-7	Paper Link	62
14	Halftone Visual Cryptography for Color Images using Error Diffusion and	Dr.Saylee Gharge, Sandhya Thomas	Electronics and Telecommun	Springer, Singapore	Online ISBN 978-981-15-3477-5	Paper Link	67

	Direct Binary Search		ications Engineering		Print ISBN 978-981-15-3476-8		
15	Data forensics On social Media	Dr. Mrs. M. Vijayalakshmi, Mannat doultani	Information Technology Engineering and Computer Engineering	IEEE	Electronic ISBN:978-1-5386-8075-9 Print on Demand(PoD) ISBN:978-1-5386-8076-6	Paper Link	72
16	On Stability And Scalability Enhancement in WSN	Dr. Ranjan Bala Jain, Meera Pillai	Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-5386-9166-3 Print on Demand(PoD) ISBN:978-1-5386-9167-0	Paper Link	73
17	Detection of Faulty Integrated Circuits in PCB with Thermal Image Processing	Dr. Nadir Charniya, Akshay Sarvade	Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-5386-9166-3 Print on Demand(PoD) ISBN:978-1-5386-9167-0	Paper Link	74
18	Determination of Rice kernel Parameters using Image Processing	Dr.Chandan Singh Rawat; Harpreet Singh Ghuman; Dharmesh Verma	Electronics and Telecommunications Engineering	IEEE	Electronic ISBN:978-1-5386-8113-8 Print on Demand(PoD) ISBN:978-1-5386-8114-5	Paper Link	75
Sample Publications for Academic Year : 2018 -19							
1	Private digital Assistant for alzheimer's patients	Mr. Prashant Kanade	Computer Engineering	Elsevier	ISBN:978-93-82626-27-5	Paper Link	77
2	Deep Learning based approach to suggest recipes	Mrs. Priya RL	Computer Engineering	IEEE	Electronic ISBN:978-1-5386-1185-2 CD:978-1-5386-1184-5 Print on Demand(PoD) ISBN:978-1-5386-1186-9	Paper Link	79

3	IoT based Hydroponic Farm	Mrs. Rupali Hande	Computer Engineering	IEEE	Electronic ISBN:978-1-5386-5873-4 DVD ISBN:978-1-5386-5872-7 Print on Demand(PoD) ISBN:978-1-5386-5874-1	Paper Link	80
4	3D Face Generation from Sketch Using ASM and 3DMM	Prof. Shanta Sondur	Information Technology Engineering	IEEE	Electronic ISBN:978-1-5386-0926-2 CD:978-1-5386-0924-8 Print on Demand(PoD) ISBN:978-1-5386-0927-9	Paper Link	81
5	High performance AC coupled Biomedical Signal Processing System using New Technique of Impedance Steering with Synchronous Sampling and A/D Conversion	Dr. J. M. Nair, Dr. P. P. Vaidya, Mrs. Nilima Warke	Instrumentation Engineering	IEEE	Electronic ISBN:978-1-5386-0965-1 Print on Demand(PoD) ISBN:978-1-5386-0966-8	Paper Link	82
6	Halftone Visual Cryptogaphy for Grayscale Images using Error Diffusion and Direct Binary Search	Dr.Saylee Gharge, Sandhya Thomas	Electronics and Telecommunication Engineering	IEEE	Electronic ISBN:978-1-5386-3570-4 DVD ISBN:978-1-5386-3569-8 Print on Demand(PoD) ISBN:978-1-5386-3571-1	Paper Link	83
7	ICT Application for Academic Enhancement of Student's Learning Process	Dr.Dhanamma Jagli	Department of Master of Computer Applications	NCRD's Sterling Insttitute of Management Studies	ISBN:978-93-5346-784-5	Paper Link	84
8	Medical Image Enhancement Using Hybrid Techniques for	Dr.R. K. Kulkarni, Shilpa	Electronics and	Springer, Singapore	Online ISBN:978-981-1	Paper Link	86

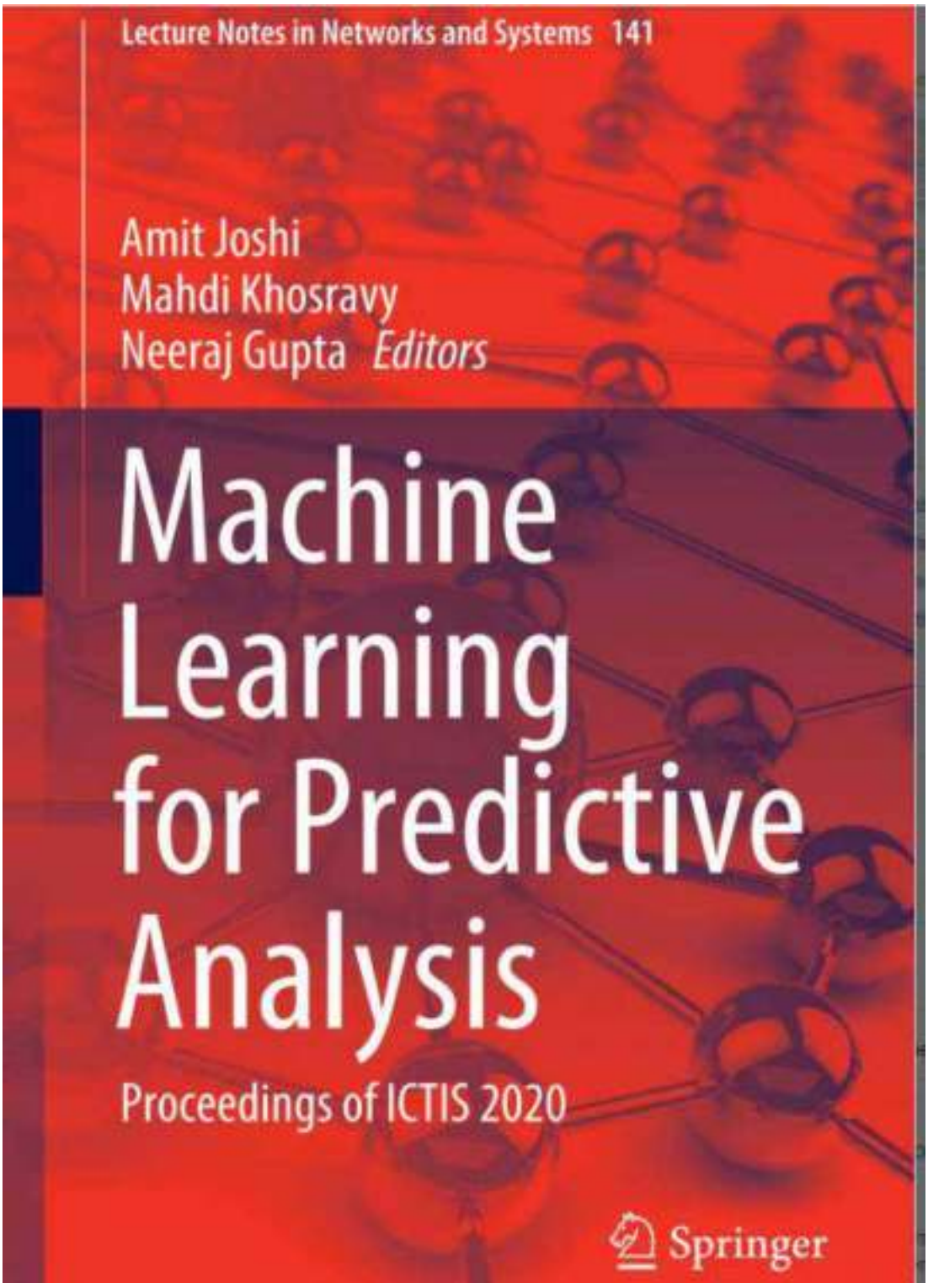
	Accurate Anomaly Detection And Malignancy Predication	Joshi	Telecommunication Engineering		3-1165-9 Print ISBN:978-981-13-1164-2		
9	Optimization of One Dimensional Photonic Crystal Structure with Light Reflection Characteristics	Dr.Manisha Chattopadhyay, S Amuthavalli	Electronics and Telecommunication Engineering	IEEE	Electronic ISBN:978-1-5386-3570-4 DVD ISBN:978-1-5386-3569-8 Print on Demand(PoD) ISBN:978-1-5386-3571-1	Paper Link	91
10	Mobile Communication System: by Ques10	Dr.Ranjan Bala Jain, Manita Rajput	Electronics and Telecommunication Engineering	Ques10	ISBN-10 : 8194142741 ISBN-13 : 978-8194142744	Book Link	92
Sample Publications for Academic Year : 2017 - 18							
1	En-SPDP: Enhanced Secure Pool Delivery Protocol" for Food Delivery System	Dr. Nupur Giri	Computer Engineering	Springer,Cham	Online ISBN: 978-3-319-63645-0 Print ISBN: 978-3-319-63644-3	Paper Link	95
2	Optimized rescue system for Accidents and Emergencies	Mr. Richard Joseph	Computer Engineering	IEEE	Electronic ISBN:978-1-5090-5013-0 DVD ISBN:978-1-5090-5012-3 Print on Demand(PoD) ISBN:978-1-5090-5014-7	Paper Link	100
3	Speed Control Of Brushless DC Motor using Microcontroller	Mr. Shobhit K. Khandare	Computer Engineering	IEEE	Electronic ISBN:978-1-5090-5013-0 DVD ISBN:978-1-5090-5012-3 Print on Demand(PoD)	Paper Link	101

					ISBN:978-1-5090-5014-7		
4	Novel filter designing for enhancement of medical images using super-resolution	Mrs. Ashwini Sawant	Electronics and Telecommunication Engineering	IEEE	Electronic ISBN:978-1-5090-6730-5 CD:978-1-5090-6729-9 Print on Demand(PoD) ISBN:978-1-5090-6731-2	Paper Link	102
5	A stochastic convergence analysis of random number generators as applied to error propagation using Monte Carlo method and unscented transformation technique	Dr. J. M. Nair, Mrs. Sangeetha Ram	Instrumentation Engineering	IEEE	Electronic ISBN:978-1-5386-3864-4 Print on Demand(PoD) ISBN:978-1-5386-3865-1	Paper Link	103
6	Smart Sensor Using Function Approximation	Mr. Kader Shaikh	Instrumentation Engineering	IEEE	Electronic ISBN:978-1-5090-3704-9 Print on Demand(PoD) ISBN:978-1-5090-3705-6	Paper Link	104
7	Ting': A PhoneGap based Android application for sharing personal and device information amongst social circles	Mrs.Geocey shejy	Department of Master of Computer Applications	IEEE	Electronic ISBN:978-1-5090-6674-2 CD:978-1-5090-6673-5 Print on Demand(PoD) ISBN:978-1-5090-6675-9	Paper Link	105
8	Drunk driving and drowsiness detection	Dr. Nadir Charniya,Mr.Vivek Nair	Electronics and Telecommunication Engineering	IEEE	Electronic ISBN:978-1-5386-0374-1 Print on Demand(PoD) ISBN:978-1-5386-0375-8	Paper Link	106
9	Gabor Feature Extraction of Mixed Fingerprint Template	Dr. R.K. Kulkarni, Shancymol Sojan	Electronics and Telecommun	IEEE	Electronic ISBN:978-1-5090-4996-7	Paper Link	107

			ication Engineering		Print on Demand(PoD) ISBN:978-1-5090-5921-8		
Sample Publications for Academic Year : 2016 - 17							
1	Parallel and distributed System (2ndEdition)	Dr. Nupur Giri	Computer Engineering	WILEY	ISBN-10 : 9788126565825 ISBN-13 : 978-8126565825	Book Link	109
2	An Enterprise Friendly Book Recommendation System For Very Sparse Data	Dr. Mrs.M Vijayalakshmi	Information Technology Engineering	IEEE	Electronic ISBN:978-1-5090-1338-8 Print on Demand(PoD) ISBN:978-1-5090-1339-5	Paper Link	113
3	Comparative analysis of image quality measures	Dr. Mr. Chandan Singh Rawat	Electronics and Telecommunication Engineering	IEEE	Electronic ISBN:978-1-5090-0467-6 Print on Demand(PoD) ISBN:978-1-5090-0468-3	Paper Link	114
4	A new method of reconfigurable ADC using calibrated programmable slopes	Dr. J. M. Nair,Dr. P. P. Vaidya ,Jaymala Adsul	Instrumentation Engineering and Electronics Engineering	IEEE	Electronic ISBN:978-1-5090-1066-0 Print ISBN:978-1-5090-1065-3 DVD ISBN:978-1-5090-1064-6 Print on Demand(PoD) ISBN:978-1-5090-1067-7	Paper Link	115
5	Implementation of K-Means Clustering for Evaluating SaaS on the Cloud computing Environment	Dr.Dhanamma Jagli	Department of Master of Computer Applications	IEEE	Electronic ISBN:978-1-5090-5515-9 Print on Demand(PoD) ISBN:978-1-5090-5516-6	Paper Link	116
6	NFC and NFC Payments: A Review	Mr.Sunny Nahar	Department	IEEE	Electronic	Paper Link	117

			of Master of Computer Applications		ISBN:978-1-5090-5515-9 Print on Demand(PoD) ISBN:978-1-5090-5516-6		
7	Satellite image resolution enhancement using DTCWT and DTCWT based Fusion	Dr. Saylee Gharge, Vineet Naik	Electronics and Telecommunication Engineering	IEEE	Electronic ISBN:978-1-5090-2029-4 USB ISBN:978-1-5090-2028-7 Print on Demand(PoD) ISBN:978-1-5090-2030-0	Paper Link	118

Sample Papers
for
Academic Year: 2020-21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Autonomous Vehicle Simulation Using Deep Reinforcement Learning

Rishikesh Kadam, Vishakha Vidhani, Bhavika Valecha, Anushree Bane, and Nupur Giri

Abstract The reinforcement learning algorithms have been proven to be extremely accurate in performing a variety of tasks. These algorithms have outperformed humans in traditional games. This paper proposes a reinforcement learning based approach to autonomous driving. The autonomous vehicles must be able to deal with all external situations to ensure safety and to avoid undesired circumstances such as collisions. Thus, we propose the use of deep deterministic policy gradient (DDPG) algorithm which is able to work in a complex and continuous domain. To avoid physical damage and reduce costs, we choose to use a simulator to test the proposed approach. The CARLA simulator would be used as the environment. To fit the DDPG algorithm to the CARLA environment, our network architecture consists of critic and actor networks. The performance would be evaluated based on rewards generated by the agent while driving in the simulated environment.

Keywords Autonomous driving · Imitation learning · Reinforcement learning · Deep deterministic policy gradient · Simulation · CARLA simulator · Self-driving agent · Artificial intelligence

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Authors | Authors and affiliations

Rishikesh Kadam, Vishakha Vidhani, Bhavika Velecha, Anushree Bane, Nupur Giri

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Abstract

The reinforcement learning algorithms have been proven to be extremely accurate in performing a variety of tasks. These algorithms have outperformed humans in traditional games. This paper proposes a reinforcement learning based approach to autonomous driving. The autonomous vehicles must be able to deal with all external situations to ensure safety and to avoid undesired circumstances such as collisions. Thus, we propose the use of deep deterministic policy gradient (DDPG) algorithm which is able to work in a complex and continuous domain. To avoid physical damage and reduce costs, we choose to use a simulator to test the proposed approach. The CARLA simulator would be used as the environment. To fit the DDPG algorithm to the CARLA environment, our network architecture consists of critic and actor networks. The performance would be evaluated based on rewards generated by the agent while driving in the simulated environment.

Keywords

Autonomous driving | Imitation learning | Reinforcement learning | Deep deterministic policy gradient | Simulation | CARLA simulator | Self-driving agent

Detection of Dyscalculia Using Machine Learning

Publisher: IEEE

Nupur Giri ; Tamanna Saini ; Kalpesh Bhole ; Anuraj Bhosale ; Tanishqa Shetty ; Alka Subramanyam ; Swati Shelke All Authors

Abstract:
The detection of learning disabilities is still tedious and time consuming and a deep research is required for the simplification of the same. Dyscalculia is one of the Specific learning Disorders (SLD) with a specific impairment in Mathematics. Early detection of Dyscalculia is one of these tedious, time consuming tasks. Detection of Dyscalculia is carried out by conducting various tests where every individual test has to be conducted and evaluated manually as the scores of these individual tests alone are not sufficient for detection. For some cases, the scores from these tests are not sufficient. Some extra tests like Curriculum Based Test [CBT's] and/or Wide Range Achievement Test [WRAT] are to be administered. Artificial Intelligence (AI) for health care involves the use of complex algorithms to emulate human cognition in the perusal of complicated medical data. The derivatives of Woodcock Johnson Tests of Achievements are used to determine learning disabilities. These tests are conducted by the doctors.

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I. Introduction

Learning Disabilities affects the thinking ability of a person and the person can face difficulty in completing everyday activities smoothly. There are different types of Learning Disabilities, amongst these some of the most common learning disabilities are: •

Dyslexia- It is also called reading disability. In Dyslexia, the person faces difficulty in reading and also in hearing sounds and relating them.

Dysgraphia-It is also called writing disability. In Dysgraphia, the person faces difficulty in

COGNITIVE ENGINEERING *for* NEXT GENERATION COMPUTING

A Practical Analytical Approach

Edited by
Kolla Bhanu Prakash
G. R. Kanagachidambaresan
V. Srikanth
E. Vamsidhar

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Chapter 11

Ensuring Security and Privacy in IoT for Healthcare Applications

Anjali Yeole, D.R. Kalbande

Book Editor(s): Kolla Bhanu Prakash, G. R. Kanagachidambaresan, V. Srikanth, E. Vamsidhar

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Cognitive Engineering for Next Generation Computing: A Practical Analytical Approach

Summary

Healthcare is a service whose forthcoming appears to be motivated by innovation and data sharing. We can effectively use Internet of Things (IoT)-based healthcare systems for patient monitoring and emergency response services by maintaining security and preserving the privacy of patient's medical records. IoT devices in healthcare can gather patient's body parameters and share information with doctors, nurses and patient's relatives. Most of the time traditional method of manual recording of body parameters and reporting them to the doctors is used. This is obtained by nurses periodically for all patients. Their precious time is for taking care of patients not for recording body parameters all the time. IoT-enabled healthcare industry is the solution for the same. This article focuses on architectures and models for IoTbased Healthcare applications along with security, privacy issues and challenges by considering industry standards. Using IoT devices for health monitoring at a personal level is very easy and comfortable but using IoT at hospital level is challenging hence integration of E-health and IoT will also be discussed in this article.

Keywords

IOT healthcare security

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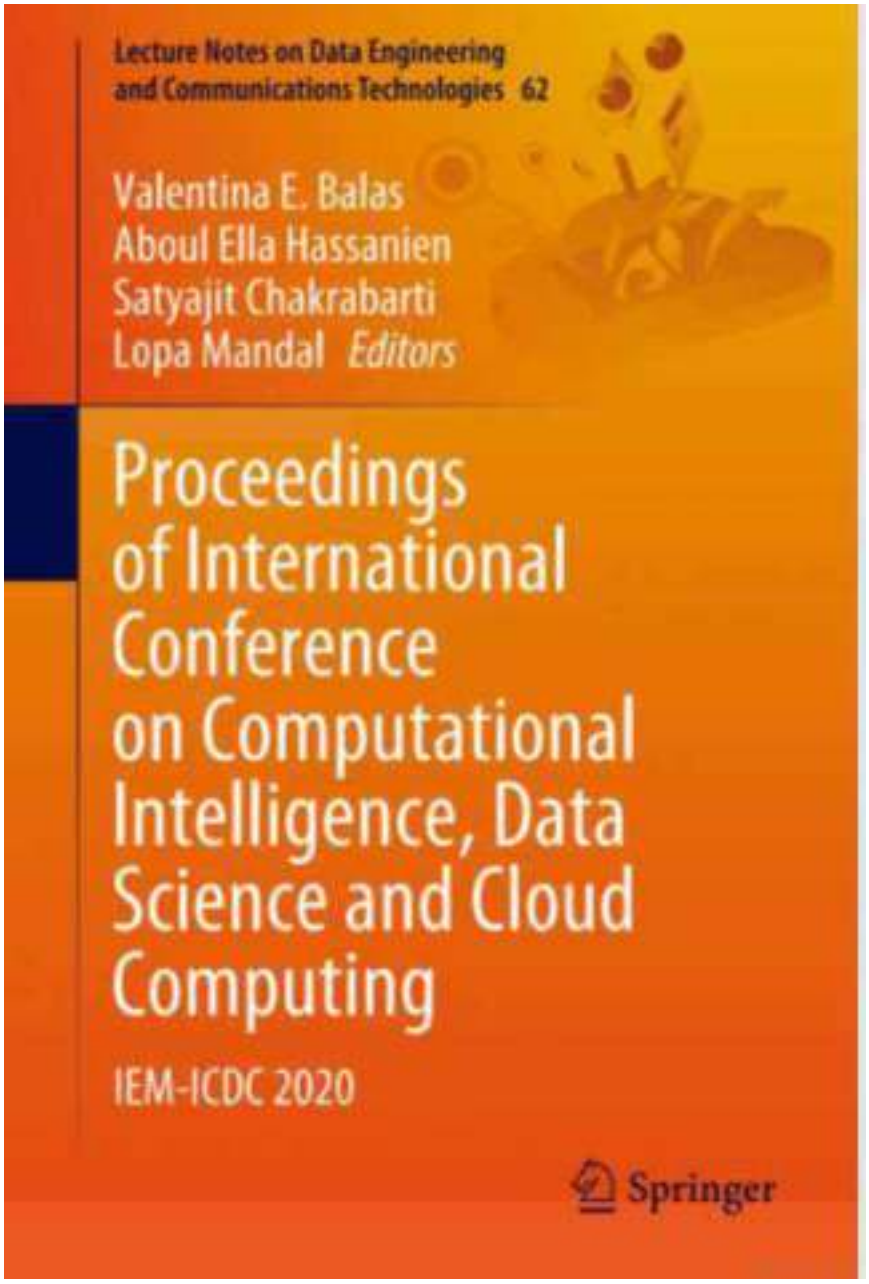
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Size Invariant Ship Detection Using SAR Images

Atharva Potdar, Parth Kingrani, Rahul Motwani, Tanishqa Shetty, and Shalu Chopra

Abstract Synthetic aperture radar also is known as SAR imagery is considered a very essential source of data for overlooking maritime or naval activities, and its application towards oil spills and ship detection has been a crucial centre of many going on exploration works. Many object detection methods including conventional and deep learning have been contemplated. But, most of them have tremendous computational overloads and are vastly inaccurate. The proposed system is implemented by using a Python web framework Flask, Tensor flow for training the deep learning model, and a database called SQlite3 as a backend for downloading the saved images. The research work undertaken assists the end-user to monitor the activities of the ships, measuring their dimensions, and thus preventing potential mishaps.

Keywords Deep learning · SAR images · Tensor flow object detection · Neural network

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Size Invariant Ship Detection Using SAR Images

Authors · Authors and affiliations

Atharva Poldar, Parth Kangrale, Rahul Hotwani, [illegible] Shetty, Shalu Chopra

Conference paper
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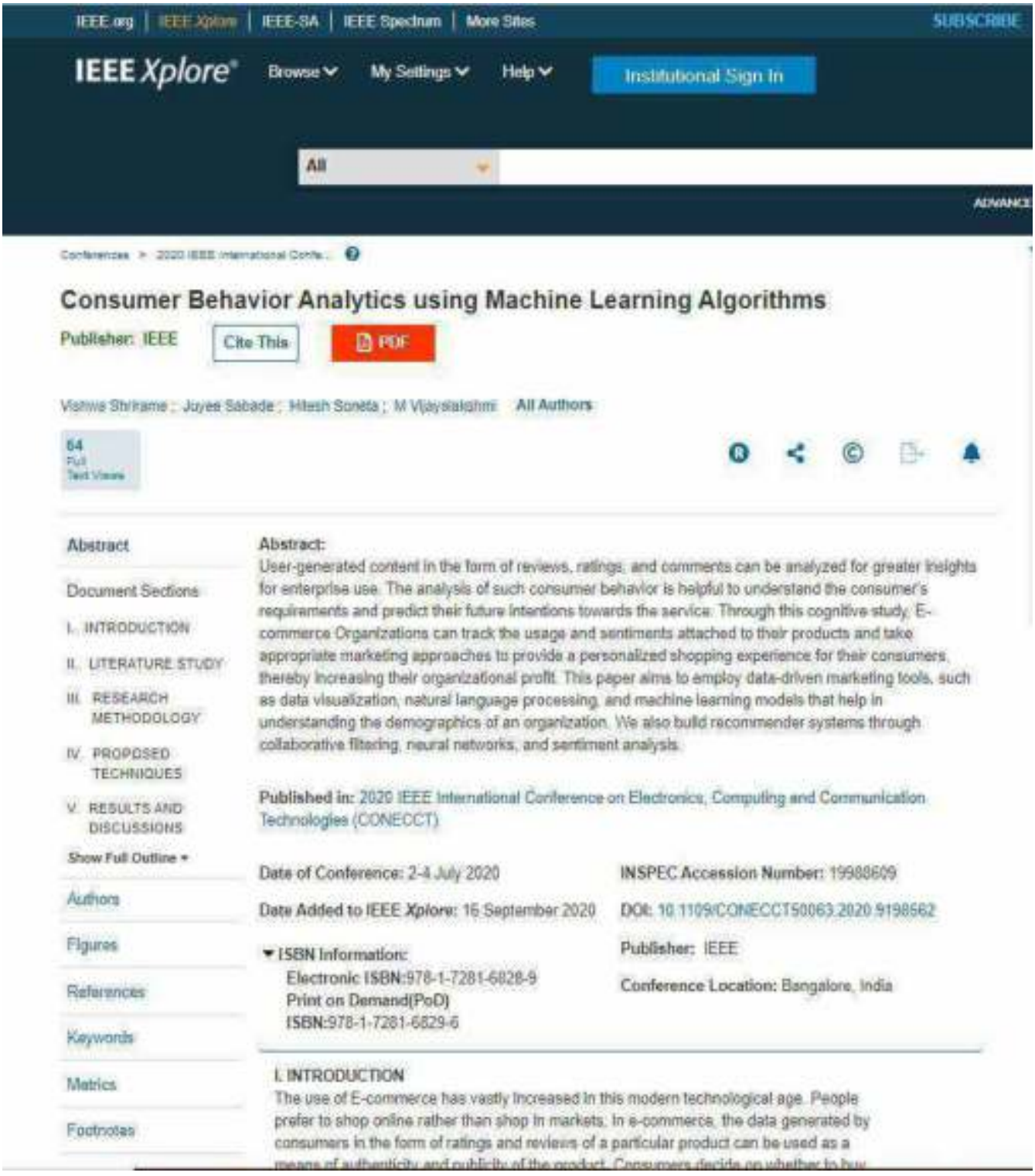
Part of the Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT, volume 62)

Abstract

Synthetic aperture radar also is known as SAR imagery is considered a very essential source of data for overlooking maritime or naval activities, and its application towards oil spills and ship detection has been a crucial centre of many going on exploration works. Many object detection methods including conventional and deep learning have been contemplated. But, most of them have tremendous computational overloads and are vastly inaccurate. The proposed system is implemented by using a Python web framework Flask, Tensor flow for training the deep learning model, and a database called SQlite3 as a backend for downloading the saved images. The research work undertaken assists the end-user to monitor the activities of the ships, measuring their dimensions, and thus preventing potential mishaps.

Keywords

Deep learning · SAR images · Tensor flow object detection · Neural network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64
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Abstract
Document Sections
I. INTRODUCTION
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III. RESEARCH METHODOLOGY
IV. PROPOSED TECHNIQUES
V. RESULTS AND DISCUSSIONS
Show Full Outline
Authors
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Keywords
Metrics
Footnotes
Abstract:
User-generated content in the form of reviews, ratings, and comments can be analyzed for greater insights for enterprise use. The analysis of such consumer behavior is helpful to understand the consumer's requirements and predict their future intentions towards the service. Through this cognitive study, E-commerce Organizations can track the usage and sentiments attached to their products and take appropriate marketing approaches to provide a personalized shopping experience for their consumers, thereby increasing their organizational profit. This paper aims to employ data-driven marketing tools, such as data visualization, natural language processing, and machine learning models that help in understanding the demographics of an organization. We also build recommender systems through collaborative filtering, neural networks, and sentiment analysis.
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Publisher: IEEE
Conference Location: Bangalore, India
I. INTRODUCTION
The use of E-commerce has vastly increased in this modern technological age. People prefer to shop online rather than shop in markets. In e-commerce, the data generated by consumers in the form of ratings and reviews of a particular product can be used as a

Snake Species Identification and Recognition

Mrugendra Vasmatkar ; Ishwari Zare ; Prachi Kumbla ; Shantanu Pimpalkar ; Aditya Sharma All Authors

Abstract:
Snake Species Identification is a challenge as erroneous snake identification from the perceptible traits is a prime reason of death because of snake bites. The main objective of the proposed system is to be able to identify snake species from their visual traits in order to provide suitable treatment, thus preventing subsequent deaths. The proposed system involves techniques based on Image Processing, Convolution Neural Networks and Deep Learning to achieve the mentioned purpose. CNN has been highly used in automatic image classification system. In most cases, extracting features and utilizing them for classification. Deep learning successfully achieves recognition of objects in images as it is implemented using artificial neural networks. Image classification tasks have seen a rise with the introduction of deep learning techniques. So far, no automated method for classification has been suggested to categorize snakes. The system that would be developed will be useful to recognize snake species correctly and thus take necessary action.

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Publisher: IEEE

Conference Location: Mumbai, India

I. Introduction

The WHO report states that around 5.4 million people suffer from snake bites annually, causing 1.8 to 2.7 million cases of envenomings(poisoning). Despite the many efforts, automated snake species recognition is a challenging task because of the similarities in

Optimal Bipolar Lead Placement in Electrooculography (EOG): A Comparative Study with an Emphasis on Prolonged Blinks

Publisher: IEEE

Cite This PDF

Raj Anchan ; Ashwin Pillay ; Aditya Kale ; Aniket Bhadiche ; Sangeetha Prasanna Ram All Authors

Abstract:
Electrooculography (EOG) is the measurement of potentials generated by the ocular muscle family during the exhibition of various eye movements. Such potentials initially sensed using electrodes placed at specific positions around the eyes, are conditioned for detection and analysis of these movements. However, the characteristics of EOG signals obtained substantially depend on the electrode placement. In this paper, a 3-electrode EOG setup was used to compare among 30 lead configurations enveloping different ocular muscles by studying their idiosyncrasies. For each combination, signals were acquired for a fixed set of eye movements executed by the same subject, including prolonged-blinks, a characteristic feature of drowsiness. A summary of the leads that would be favorable for the detection of each movement is then presented. Furthermore, such readings were recorded separately for different reference electrode positions to compendiously determine the optimal electrode placement for the detection of EOG signals corresponding to drowsiness.

Published in: 2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT)

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INSPEC Accession Number: 20063964

DOI: 10.1109/ICCCNT49239.2020.9225609

Publisher: IEEE

Conference Location: Kharagpur, India

I. Introduction

Eyes are organs that can represent both the aware and oblivious state of the mind. Eye movements are controlled by ocular muscles that obtain signals from the brain for voluntary movements such as fixating on and tracking stimuli as well as involuntary movements which may be based on emotions among other factors. Some common voluntary eye movements include rightward gaze, upward gaze and so on while involuntary eye movements include blinks, the sudden closure of eyes due to brightness, etc. One such eye movement includes blinks of prolonged duration (prolonged blinks)

Application of Extension of Unscented transformation technique to the nonlinear case of error propagation

Publisher: IEEE

Sangeetha Prasanna Rani ; Jayalekshmi Nair ; S Ganesan All Authors

Abstract:
Error propagation of a random variable for a case of large uncertainty and nonlinearity is studied, for the first time, using the extended unscented transformation technique (EUT), which is an extension of the unscented transformation (UT)technique, by revisiting an example studied in the literature by Smith, Neudecker, and Capote-Noy (Report INDC NDS-0709, 2016). In this example, the first four moments of a nonlinear transformation of a random variable of single dimensionality are determined, using extended unscented transformation technique and compared with 500000 histories of the Monte Carlo (MC) method. It is observed that the EUT method is in better agreement with results obtained using the MC method and superior to the UT method which has been applied by the authors in their earlier papers.

Published in: 2020 Fourth International Conference on Inventive Systems and Control (ICISC)

Date of Conference: 8-10 Jan. 2020

Date Added to IEEE *Xplore*: 19 August 2020

INSPEC Accession Number: 19896978

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Publisher: IEEE

Conference Location: Coimbatore, India

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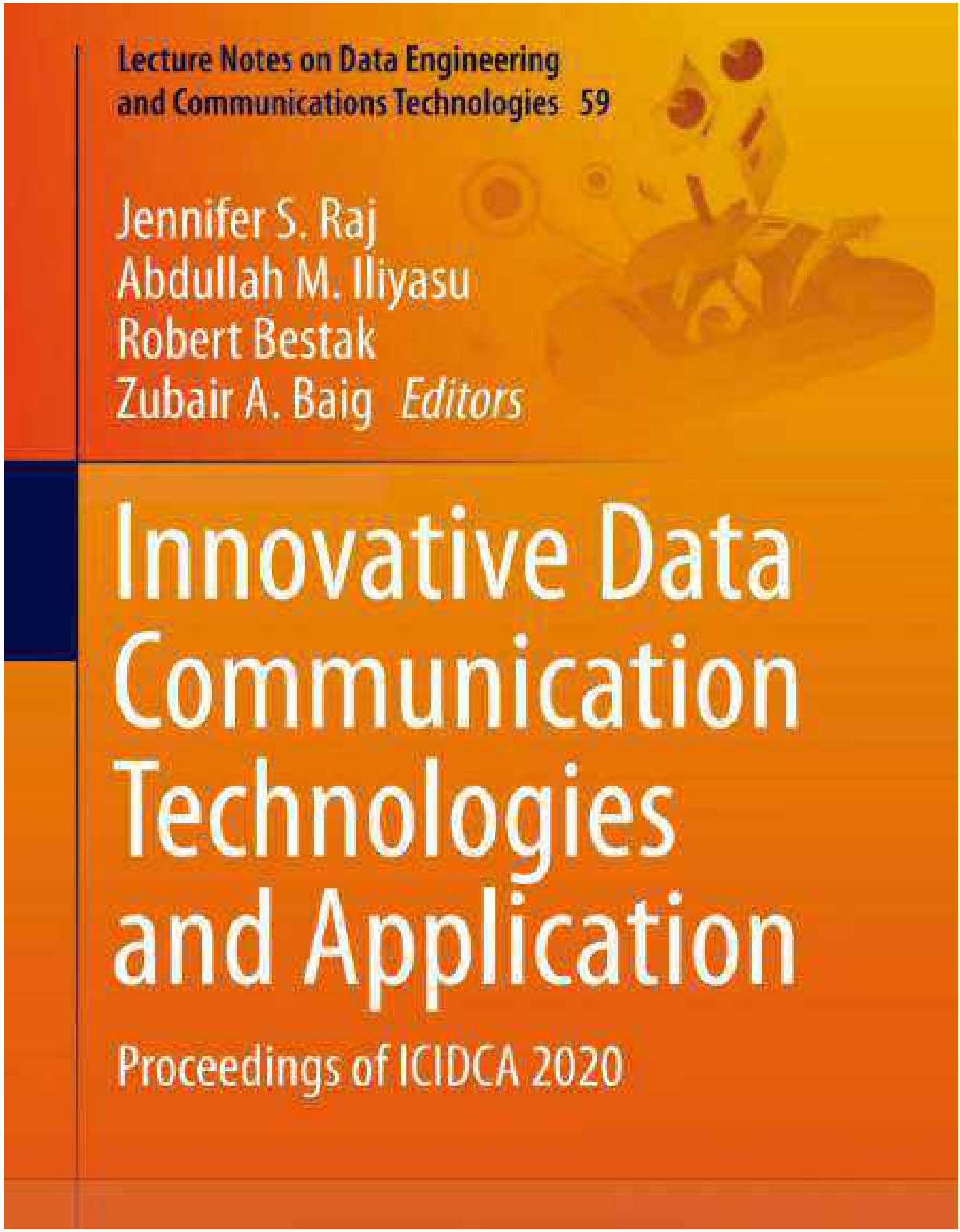
I. Introduction (Heading 1)

Error propagation is the effect of errors or uncertainties in the input variables on the uncertainty of the function which is based on them. Error propagation techniques help in


Lecture Notes on Data Engineering and Communications Technologies 59
Jennifer S. Raj
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A Survey on Recent Advances in Cyber Assault Detection Using Machine Learning and Deep Learning

Piyusha S. Pakhare, Shoba Krishnan, and Nadir N. Charniya

Abstract Cyber attacks hit companies, businesses, and common people every day. Cybercrime is increasing year by year as criminals that are trying to benefit from vulnerable sources. Software attacks are very difficult to detect as it hides in a very sophisticated way on the network. This survey paper gives a review of various machine learning (ML) methods used to detect different attacks. Several methods/architectures developed by researchers to detect cybercrimes using deep learning and machine learning techniques of classification are also discussed. It can be seen that machine learning and deep learning models are efficient in detecting cybercrimes with high accuracy when proper training is given.

Keywords Cyber attacks · Supervised learning · Unsupervised learning · Deep learning · Machine learning

1 Introduction

Cyber security is a very popular term today. Nowadays, almost every person uses computers and the Internet. People spend a long time on the Internet for conducting their banking transactions, shopping, communicating using e-mails, and other social media platforms. Due to this dependency, illegal computer activities are growing and changing like any type of crime. Any crime carried out using both computers and the Internet is called cybercrime or cyber attacks. Simply, cyber attacks are the attacks launched using one computer or more than one computer on some other computer/computers or a completely different network.

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Innovative Data Communication Technologies and Application pp 571-582 | Cite as

A Survey on Recent Advances in Cyber Assault Detection Using Machine Learning and Deep Learning

Authors Authors and affiliations

Piyusha S. Pakhare, Shoba Krishnan, Nadir N. Charniya

Conference paper
First Online: 03 February 2021

Part of the Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT, volume 59)

Abstract

Cyber attacks hit companies, businesses, and common people every day. Cybercrime is increasing year by year as criminals that are trying to benefit from vulnerable sources. Software attacks are very difficult to detect as it hides in a very sophisticated way on the network. This survey paper gives a review of various machine learning (ML) methods used to detect different attacks. Several methods/architectures developed by researchers to detect cybercrimes using deep learning and machine learning techniques of classification are also discussed. It can be seen that machine learning and deep learning models are efficient in detecting cybercrimes with high accuracy when proper training is given.

Keywords

Cyber attacks Supervised learning Unsupervised learning Deep learning

Artificial Neural Network-based Detection of Diabetes and its Effects on Vision - A survey

Publisher: IEEE

Cite This

PDF

Akanksha U. Naik ; Ramesh K. Kulkarni All Authors

Abstract:
Millions of people are suffering from diabetes, making it a primary health issue now-a-day. International Diabetes Federation mentioned a fact about Diabetes is that there are about 46.5% of adults whose diabetes is undiagnosed. Once the diabetes is detected and if it is not cured for a longer period then it can mainly affect on eyes, kidneys, skin and heart. In this survey, the effects of diabetes on human eyes are mainly considered. Diabetic retinopathy is the common eye disease which damages the retina resulting in permanent blindness. Detection in an early stage is essential to save the person's vision. It also reduces the workload of ophthalmologist in detection of Diabetic Retinopathy. The paper presents the comparison of SVM, ANN and CNN in diagnosing the lesion of the diabetic.

Published in: 2020 5th International Conference on Communication and Electronics Systems (ICCES)

Date of Conference: 10-12 June 2020

Date Added to IEEE *Xplore*: 10 July 2020

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I. Introduction

Nowadays many people worldwide are deteriorated from diabetes. Diabetes is an addictive or incurable disease in which pancreas is unable to produce a good amount of

Convolutional Neural Network for Diabetic Retinopathy Detection

Publisher: IEEE

Cite This | PDF

Shital N. Firke ; Ranjan Bala Jain All Authors

Abstract:
The world's projected blind population will reach 40 million by 2025. A modern fundus-based algorithm that approves the classification of retinal tissue needs to be improved in the early stages of healthy and diabetic retinopathy. In this experiment, we have introduced a convolution neural network approach to detecting diabetic retinopathy. We used the publicly accessible Apatos Blindness Detection database to train a convolution neural network, where the image is processed at an early stage, primarily involving image resizing, pixel rescaling, and label encoder. After that, an image is given to the convolution neural network model, to decide whether the patient has diabetic retinopathy or not. About 3789 color retinal images are used in experiments to train the proposed model and about 948 images are collected to test its efficiency in classification. Accuracy of 96.15\%, Sensitivity 79\%, Precision 89\%, and F1-Score 84.1\% and Area Under Score 0.82 is achieved using the Convolution Neural Network-based method.

Published in: 2021 International Conference on Artificial Intelligence and Smart Systems (ICAIS)

Date of Conference: 25-27 March 2021

Date Added to IEEE *Xplore*: 12 April 2021

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I. Introduction

Diabetes is the biggest issue being suffered by the world today. According to a World Health Organization survey, the global incidence of diabetes was 2.8\ % in 2000 and by 2030 current statistics will ris... affect of a retina blood vessel (BV) is diabetic retinop... fuzzy sight, irregular sight, vitiated sight, vacant areas in sight, and difficulty seeing at night are evident

Sentiment Analysis using Deep Learning - A survey

Publisher: IEEE Cite This PDF

Sneha Sukheja ; Shalu Chopra ; M. Vijayalakshmi All Authors

Abstract:
Opinion Mining and Sentiment analysis on textual data are widely carried out. The main aspect is what techniques we use to accentuate the performance of these models. In this paper, we are going to perform multi-class sentiment analysis using Deep Learning models like Long Short Term Memory (LSTM) and C-LSTM on textual data and compare its performance. We also see its results as compared to other Machine Learning models. Performance evaluation technique like parameter tuning using Dropout regularization is carried out to analyze its effect on the accuracy of the model. The models were also trained using three different datasets for observing the results.

Published in: 2020 International Conference on Computer Science, Engineering and Applications (ICCSEA)

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DOI: 10.1109/ICCSEA49143.2020.9132863

Publisher: IEEE

Conference Location: Gunupur, India

I. Introduction

In this tech-savvy world, people have abundant access to social media. People convey their views and opinions using social media platforms. The data generated by the users every day is in massive amounts. The source of the data may be different. If a person wants to buy a product or wants to use any service, then he/she will first look upon its reviews online. Before making [illegible] discuss it with other

Design and Construction of Programmable Time-to- Amplitude Converter

Aishvarya Salvi ; Kanchan Chavan ; Prakash Vaidya All Authors

Abstract:
A method of implementation of programmable time- to-amplitude converter is reported in this paper. It employs a 16-bit multiplying digital-to-analog converter which outputs a precise current equivalent to the digital code applied. An integrator circuit using an operational amplifier having a low input bias current with a very high-speed analog switch in its feedback is used that governs the charging and discharging of the ramp. The start and stop pulses are applied to this switch. As per the change in the digital code applied, the slope varies thus changing the time interval measurement range. The time in this case is programmable due to the incorporation of 16- bit multiplying DAC. The digital code provided to the digital-to-analog converter is through a graphical user interface developed using python 3.7 software. A teensy 3.6 board is used for PC interface and to generate required input code to digital- to-analog converter.

Published in: 2020 4th International Conference on Trends in Electronics and Informatics (ICOEI)(48184)

Date of Conference: 15-17 June 2020

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INSPEC Accession Number: 19789198

DOI: 10.1109/ICOEI48184.2020.9142973

Publisher: IEEE

Conference Location: Tirunelveli, India

I. Introduction

Timing spectroscopy system includes the time measurement and spectrum relation between any two events. These events may be an alpha, beta, gamma rays or photons which approach the detectors. The method for the time measurement between two

Cancer Cell Detection using 2D Photonic Crystal

Publisher: IEEE

Cite This | PDF

Karuna Gamare ; Ranjan Bala Jain All Authors

Abstract:
In this paper a fast, efficient and accurate method for the detection of a cancerous cell using Two-dimensional (2D) photonic crystal is proposed. Photonic crystal has many advantage of small size, portability, low cost, high sensitivity and accuracy. The detection of cancer cell is based on the fact that the refractive index of cancer cells differ from normal cells in human body. This difference in refractive index can be observed using optical techniques in 2D photonic crystal. The detection mechanism consists of shift in reflection or transmission coefficient on different wavelength, when a sample of cell is placed in to 2D photonic crystal structure with defect and this shift is different for different types of cancer cells. This helps in interpreting the type of cancer efficiently. For analysis of different cancer cells, refractive index of cancer cells have been taken instead of refractive index of air in the structure. This paper analyzes the shift in wavelength for various cancer cells such as PC12, Basal, Jurkat, Cervical, MCF-7, MDA-MB 231 with the help of grating structure, structure with defect and double ring structure. Finite Element Method based simulation tool, COMSOL Multiphysics has been used for analysis and results are presented in the form of reflection coefficient vs wavelength for various cancer cells.

Published in: 2020 International Conference on Convergence to Digital World - Quo Vadis (ICCDW)

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Publisher: IEEE

Conference Location: Mumbai, India

I. Introduction

Cancer is the most leading cause of death global. Globally, the ratio of death is 1 in 6 due to cancer disease. Cancer begins when normal cells start to grow out of control [1]. These uncontrolled cells can destroy healthy cells. Early identification and treatment of cancer helps millions of people around the world to extend their life. There are many types of cancers in the human body such as stomach, colorectal, liver, breast, cervical, lung etc. Early detection of Cancer is necessary to save the life of a patient and give him proper medical treatment in time. There are various methods for cancer detection such as Mammography, Computed Tomography (CT) scan [2], Positron Emission Tomography

Sample Papers
for
Academic Year: 2019-20

Disease Migration, Mitigation, and Containment: Impact of Climatic Conditions & Air Quality on Tuberculosis for India

Publisher: IEEE

Cite This PDF

Nupur Giri ; Sarika Chavan ; Raghav Heda ; Reema Israni ; Ritika Sethiya All Authors

Abstract:
Changes in the environment affect the epidemiology of air-borne diseases. The paper presents the detailed impact analysis through cross-correlation findings of historic data of air pollution parameters namely SO2, NO2, RSPM and climatic parameters namely Rainfall, Average Temperature and Relative Humidity with Tuberculosis incidents (Total TB cases, Smear positive cases) (Indian Scenario). The work carried out would further be used for prediction of Tuberculosis in the near future using different Machine Learning and Deep Learning techniques.

Published in: 2019 IEEE Pune Section International Conference (PuneCon)

Date of Conference: 18-20 Dec. 2019

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INSPEC Accession Number: 19669852

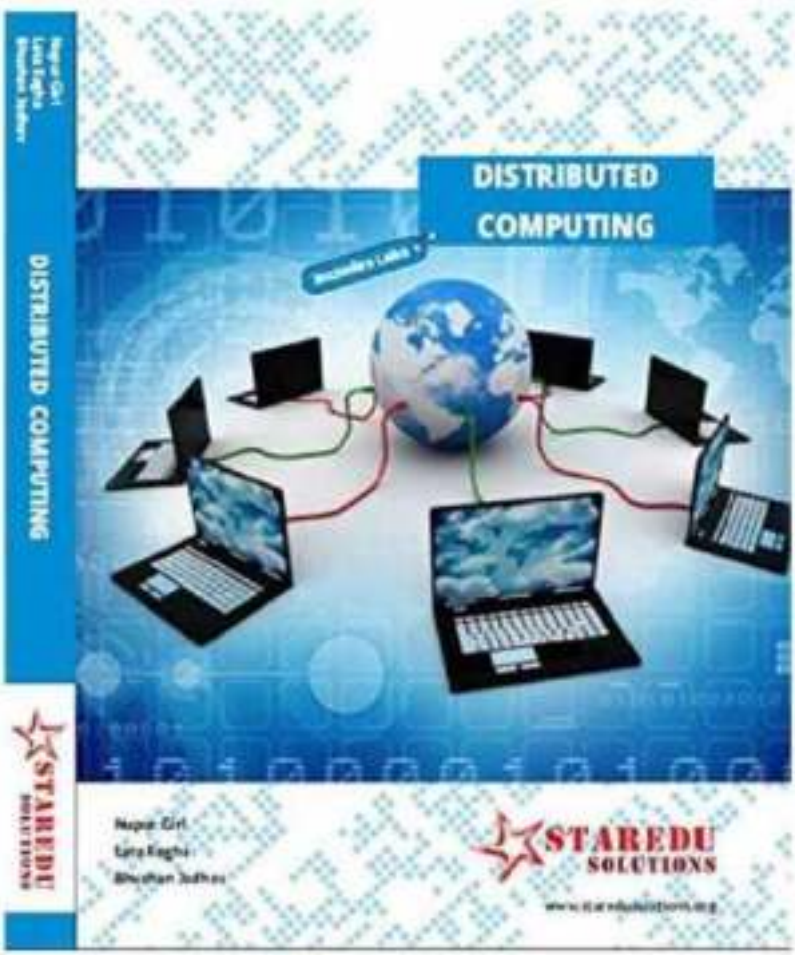
DOI: 10.1109/PuneCon46936.2019.9105881

Publisher: IEEE

Conference Location: Pune, India

I. Introduction

Climate changes, such as global warming, increased rainfall, or increased water scarcity and even more extreme weather conditions, such as flooding and storms have measurable effects on the varied climates found across countries like India. The magnitude of these changes impacts the local conditions and the specific ecology and epidemiology of the different diseases. Climatic conditions strongly affect air-borne, water-borne and vector-borne diseases. Geographical conditions also add to these effects. Therefore capacities ... ate change might alter



Distributed Computing Paperback – 1 January 2020

by Gir | Raghi | Jadhav (Author)

Paperback

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English	StarEdu Solutions	1 January 2020	9386765373	978-9386765376

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Language : English

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ISBN-13 : 978-9386765376

Contents

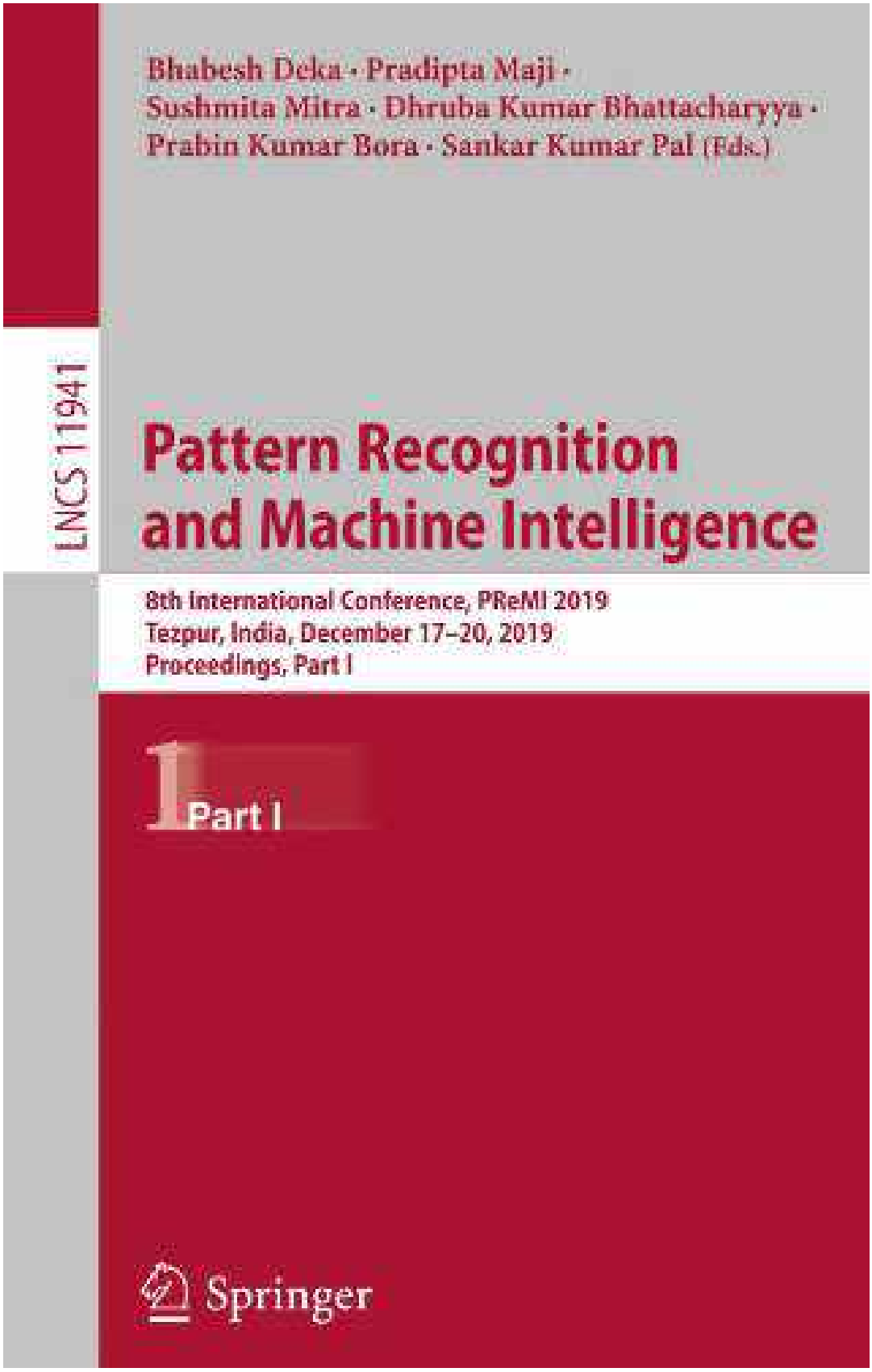
Introduction to Distributed Systems

1

OBJECTIVES

After reading this chapter, the student will be able to understand:

- Definition, goals and issues of distributed system
- Types of distributed systems
- Distributed system models
- Hardware and software concepts related to distributed system
- Models of middleware
- Services offered by middleware
- Client/Server model


Bhabesh Deka · Pradipta Maji ·
Sushmita Mitra · Dhruba Kumar Bhattacharyya ·
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Machine Learning

Deep Learning

Dyscalculia Detection Using Machine Learning

Alka Subramanyam[1], Sonakshi Jyrwa[1], Juhi M. Bansinghani[2], Sarthak J. Dadhakar[2], Trena V. Dhingra[2], Umesh R. Ramchandani[2(✉)], and Sharmila Sengupta[2]

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Abstract. A great amount of research is going on in the detection of learning disabilities, but the detection of Dyscalculia remains a tedious and time-consuming task even today. Various tests are conducted to detect if the patient has Dyscalculia and each test has to be evaluated manually as the scores alone are not sufficient to determine it. In some cases, Curriculum-Based Tests [CBTs] or Wide Range Achievement Tests [WRAT] or both need to be conducted after analysis of the results of the Woodcock-Johnson Tests. As a collaborative project between the Department of Psychiatry B.Y.L. Nair Ch. Hospital and Department of Computer Engineering, Vivekanand Education Society's Institute of Technology a system is developed to help improve the detection of Dyscalculia. The Woodcock-Johnson Tests of Achievements are conducted by the doctors and the results of these tests determine the learning disability.

Keywords: Decision tree · Dyscalculia · Learning disability · Machine learning · Random forest · Woodcock-Johnson tests of achievements

1 Introduction

Specific learning disorder (SLD) is a neurodevelopmental disorder characterized by difficulties in learning and using academic skills such as reading, writing and calculations despite the adequate socio-cultural opportunity, intact vision and hearing, normal intelligence and conventional schooling [5,15,17]. Dyscalculia is a type of SLD with specific impairment in Mathematics. It is an alternate term used to refer to a pattern of difficulties characterized by difficulty in numerical processing, learning and memorization of mathematical facts, mathematical reasoning and fluency [7]. About 5–15% of school-going children in India have SLD. There is a dearth of studies in India on SLD and Dyscalculia specifically.

The inability to process information can interfere with learning primitive skills such as reading, writing and/or mathematics. Along with those skills it

B. Deka et al. (Eds.): PReMI 2019, LNCS 11941, pp. 111–120, 2019.
https://doi.org/10.1007/978-3-030-34869-4_13

International Conference on Pattern Recognition and Machine Intelligence
PReMI 2019: Pattern Recognition and Machine Intelligence pp 111-120 | Cite as

Dyscalculia Detection Using Machine Learning

Authors Authors and affiliations

Alka Subramanyam, Sonakshi Jyoti, Juki H. Bandelghan, Sarthak J. Dadhekar, Trena V. Dhingra, Umesh R. Ramchandani, Shamila Sengupta

Conference paper
First Online: 25 November 2019

Part of the Lecture Notes in Computer Science book series (LNCS, volume 11941)

Abstract

A great amount of research is going on in the detection of learning disabilities, but the detection of Dyscalculia remains a tedious and time-consuming task even today. Various tests are conducted to detect if the patient has Dyscalculia and each test has to be evaluated manually as the scores alone are not sufficient to determine it. In some cases, Curriculum-Based Tests [CBTs] or Wide Range Achievement Tests [WRAT] or both need to be conducted after analysis of the results of the Woodcock-Johnson Tests. As a collaborative project between the Department of Psychiatry B.Y.L. Nair Ch. Hospital and Department of Computer Engineering, Vivekanand Education Society's Institute of Technology a system is developed to help improve the detection of Dyscalculia. The Woodcock-Johnson Tests of Achievements are conducted by the doctors and the results of these tests determine the learning disability.

Keywords

Decision tree Dyscalculia Learning disability Machine learning Random forest Woodcock-Johnson tests of achievements

5

Information Analysis of Ophthalmic Sonographic Reports Using NLP

[redacted] Sengupta, [redacted] Shreyas Talole, [redacted] Aditya Shinde, [redacted] Atharva Bapat

Abstract

The aim of the paper is to correctly classify the test reports with respect to the tests done on the patient, and the diagnosis; to enable the doctor to efficiently access the records to annotate the report images for training a deep learning model that could identify the disease without any human involvement. To manually classify a huge number of reports is a tedious and time-consuming task and automation would be preferred to be used. To make use of advanced computer algorithms to produce benevolent results will be considered to be a valuable contribution. The task begins with extracting the text from the doctor's reports and classifying the information into various parts in accordance with the report itself. This text content is in the form of a doctor's investigation and therefore it is required to convert it into a structured format. This format is henceforth used to train a model that classifies the report automatically and notifies the presence/absence of any disease. The model would then be able to correctly detect the presence of the disease and would make a record of the same in the statistical CSV file.

[redacted] Associate Professor, Department of Computer Engineering, Vivekanand Education Society's Institute of Technology, Chembur, Maharashtra, India.
[redacted] Student, Department of Computer Engineering, Vivekanand Education Society's Institute of Technology, Chembur, Maharashtra, India.

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Middle English	Staredu Solutions	1 January 2020	9386765705	978-9386765705

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Table Of Contents

IoT Sensor and Deep Neural Network based Wildfire Prediction System

Publisher: IEEE

Cite This

PDF

Vidya Zope ; Tarun Dadlani ; Ashutosh Matai ; Pranjali Tembhurnikar ; Richa Kalani All Authors

Abstract:
Forests, one of the most valuable and necessary resources and protect earth's ecological balance, are a natural habitat to animals and forest products are vital in our lives in many direct and indirect ways. But wildfires can cause critical damage to grounds and many other resources like properties, human life, wildlife in superabundant amounts. Wildfires burn acres of land and destroy everything in their paths in mere minutes. Wildfire destroys homes, animals, trees and plants, wildlife as well as vegetation. The effects of wildfires are numerous and wide-ranging. It causes a hugely significant impact on the economy, environment, heritage and social fabric of rural areas. Naturally caused wildfires can be predicted using factors[3] like temperature, humidity, soil moisture, pressure and many more. In this paper, the prediction of forest fires by machine learning using some operational monitoring over a region and encountering changes in climate using different sensors are advocated. The Wildfire Prediction System (WiPreSy) monitors and records changes in climatic parameters and predicts the intensity of forest fire based on real-time data, thus avoiding the massive loss due to forest fires.

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Publisher: IEEE

Conference Location: Madurai, India

I. Introduction

A forest is entirely a biological community for biotic as well as abiotic factors like animals, birds, trees, etc. and water, rocks, and climate in that forest area, respectively. Wildfires are one of the worst types of natural disasters to hit any part of the world. Every year there is a fire season during the Australian summer. Such wildfires are caused due to climate change. In July 2019, a massive forest fire began in Australia. In this season, at least 27 million acres of Australia have been burnt, 29 people were killed and 2,500 homes were destroyed. It is estimated that 1.25 billion animals have been lost in Australian wildfires. [7] Research shows lightning and climate change are the causes of Australian wildfires. Another devastating wildfire in the Amazon rainforest broke out in

Protection of Mangrove Forests using Image Processing Techniques

Publisher: IEEE

Kajal Jewani ; Prerna Baliga ; Prem Amal ; Piyush Mangtani ; Yash Kasturi All Authors

Abstract:
With the increasing degradation of mangroves, the coastal areas are getting affected to such an extent that, the mangroves are on the verge of extinction. In this paper, discussion regarding various methods to determine the mangrove cover in a particular area is done. Two images will be taken at different time intervals of that particular area and pre-processing of the images will be done along with feature extraction and a difference image will be produced. This difference image would help in determining the cause of mangrove destruction and kind of measures which could be taken to prevent such destruction. This paper proposes various image processing algorithms which can be used for mangrove extraction and detection.

Published in: 2019 6th International Conference on Computing for Sustainable Global Development (INDIACom)

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Conference Location: New Delhi, India

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Print on Demand(PoD)
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I. Introduction

Mangrove is important with respect to coastal areas. They provide important functions like preventing coastal erosion, carbon storage, coverage of shorelines. They provide habitat to different species of birds, mammals etc. They also help in maintaining the quality of water, filtering out t... ect contact with tidal

Computation of Strain in Deformed Pearlitic Steel Using Digital Image Correlation Technique

Publisher: IEEE

Cite This PDF

Kavita Tewari ; R. K. Kulkarni All Authors

Abstract:
In the present paper, digital image correlation (DIC) technique has been used to investigate the deformation process in metal and alloys. For this purpose, of a sample of pearlitic steel, comprising a fine distribution of alternate layers of ferrite and cementite, was deformed, and the same region of the sample was investigated before and after deformation. The analysis of the deformation of the sample was carried out using an open-source software Ncorr. Using DIC technique displacements along preselected x and y-axes were estimated, which were, in turn, used in computing strains along x and y directions representing normal strains along with shear strains. The results obtained have elucidated variation and localization of the strain at different points of the sample.

Published in: 2019 International Conference on Advances in Computing, Communication and Control (ICAC3)

Date of Conference: 20-21 Dec. 2019

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INSPEC Accession Number: 19487029

DOI: 10.1109/ICAC347590.2019.9036743

Publisher: IEEE

Conference Location: Mumbai, India

I. Introduction

Determination of local strain in a material is a long-standing issue, as it helps in identifying the probable regions of crack initiation [1]. Prior identification of regions of strain accumulation can help in predicting the failure of a component. Such a problem not only has technological importance but also is scientifically challenging. Therefore, a variety of approaches to calcu d strains, namely, strain-gauge method, interferometri (DIC), has been developed [2]. In this regard, such advancements in the field of digital image processing in the past few years have drawn considerable attention, and owing to these

IoT based Autonomous Tunnel Electrical Cable Fault Detection and Maintenance Robot

Publisher: IEEE

Cite This

PDF

Asawari Dudwadkar ; Amogh Gajare ; Yogesh Tembe ; Amey Sonje All Authors

Abstract:
For the long term sustainability perspective, many major cities around the globe are using underground tunnels for power cable distribution. The conventional method is environmentally damaging and significantly more expensive. Human workers face many difficulties in maintaining and repairing the power cables in underground tunnels. Hence our system substitutes the need for a human presence inside the tunnel for fault detection of power cables. Our system presents a model of a robot that can inspect the surrounding conditions of the underground tunnel by traveling from one end of the tunnel to another without any human interference. With the help of the sensors employed on the Robot, all the information about underground tunnels such as the presence of harmful gases, temperature, obstacles, and fire accidents is transmitted by a wireless means through RF transceiver. Along with this data, the Robot detects physical damage on the wire and sends fault location to the receiving station through RF transceiver. Hence the above data helps the user to estimate the safety or danger level and accordingly to decide the plan of action to solve the problem in the fastest way possible.

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ISBN Information:
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ISBN:978-1-7281-2387-5

Publisher: IEEE

Conference Location: Mumbai, India

I. Introduction

In today's 21st century, as science and technology are progressing day by day, urbanization of the cities is accelerated, and the available space is wholly utilized effectively for the construction of efficient infrastructure. It facilitates the use of underground space for further development and constructing a tunnel structure for the fulfillment of various needs of the community. One of the basic needs of today's generation is electricity. The failure of the underground power distribution system causes

Design of a Universal Partial Discharge Simulator

Publisher: IEEE Cite This PDF

Lekshmi A. Kaimal ; Himanshu J. Bahirat ; Prakash P. Vaidya ; Shrikrishna V. Kulkarni All Authors

Abstract:
The processes of inception, growth, and propagation of Partial Discharge (PD) along the dielectric are complicated. Their analysis requires a thorough understanding of underlying physics. A software simulation tool has been developed to study typical PD processes. The simulator generates pulses of varying amplitudes, shapes and time of occurrence of pulses observed in practice using National Instruments LabVIEW software as a base platform. The rise time of PD pulses plays an important role in the characterization of PD. The rise time formulation has been attempted based on the approach using the dipole moment development and law of conservation of energy. PD phenomenon is usually studied with the assumption of an air-filled void being energized by parallel plate/ coaxial cylinder electrode configuration. An SF_6 -filled spherical void inside a dielectric between two coaxial cylinder electrode plates is used as another configuration. Phase-resolved partial discharge (PRPD) pattern and the characteristics of PD pulses simulated are in agreement with results reported in literature. The contribution of this paper is versatility of the simulator for detailed study and comprehensive analysis of PD without the use of high voltage (HV) setup.

Published in: 2019 IEEE 4th International Conference on Condition Assessment Techniques in Electrical Systems (CATCON)

Date of Conference: 21-23 Nov. 2019

Date Added to IEEE *Xplore*: 27 April 2020

INSPEC Accession Number: 19608527

DOI: 10.1109/CATCON47128.2019.CN0014

Publisher: IEEE

Conference Location: Chennai, India

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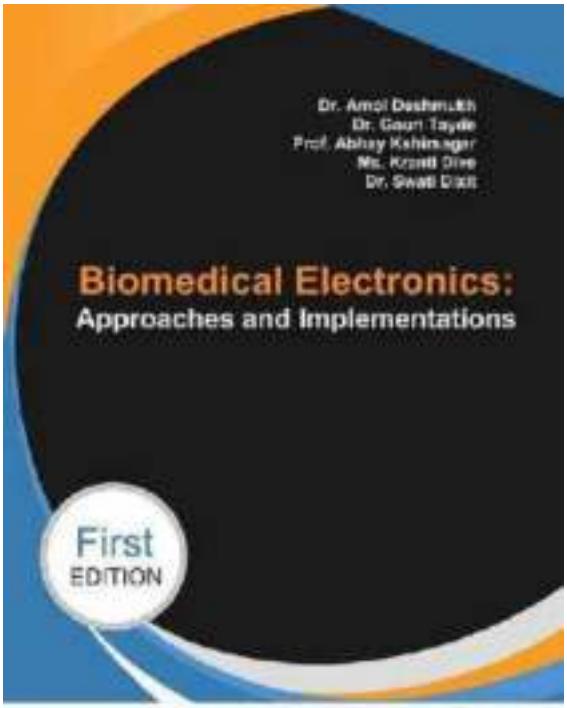
I. Introduction

The major reason for sudden breakdown of HV equipment in service is the insulation or dielectric breakdown which is normally preceded by presence of repetitive discharges, each of which further deteriorates the insulator [1]. These discharges are referred to as



BIOMEDICAL ELECTRONICS: APPROACHES AND IMPLEMENTATIONS

First Edition

Dr. Amol Deshmukh
Dr. Gouri Tayde
Prof. Abhay Kshirsagar
Ms. Kranti Dive
Dr. Swati Dixit

Edition: 1st Edition
Volume: 1st Volume
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The Book concentrates on Implementation of various Electronic Technologies to infuse the usage of Biomedical Electronics to ease out the issues of Medical Sciences. The Book covers various designs and projects made for medical field. The issues and challenges are also discussed. The implementations which have been implemented pertaining to Biomedical Electronics include Design of Reconfigurable and Scalable Wireless Body Area Network, Design of Incubator for Infants using Embedded System, Disease Detection using Image Processing.

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Chapter 1

Introduction

Biomedical Electronics relates to advanced knowledge in Engineering and Medicine and is one of the most extensively growing fields of this era where people prefer the best and precise health service. Challenges lies in design of sophisticated and precise equipments.

It is the application of engineering principles and design concepts to medicine and biology for healthcare purposes (e.g. diagnostic or therapeutic). It seeks to close the gap between engineering and medicine, combining the design and problem solving skills of engineering with medical biological sciences to advance health care treatment, including diagnosis, monitoring, and therapy. Concern lies with the use of current medical equipments within hospitals while adhering to relevant industry standards. This involves making equipment recommendations, procurement, routine testing and preventive maintenance.

It is an interdisciplinary specialization among already-established fields.

The key factors driving biomedical electronics are rising healthcare costs, the need for access to medical diagnosis and treatment in emerging and remote regions and in homes, and the fast development of biotechnologies. Great opportunities and challenges of biomedical electronics have attracted tremendous research efforts in both academia and industry. The major future trends in biomedical electronics are portability, miniaturization, connectivity, humanization, security, and reliability. Portability requires accurate bio-signal sensors/actuators, efficient system power management, ultra-low power electronics, and energy harvesters. Humanization of biomedical devices requires design considerations from patients and clinical experiences. Data security requires more hardware and software tools to support medical data security. Reliability requires enforcement of regulations and standards.

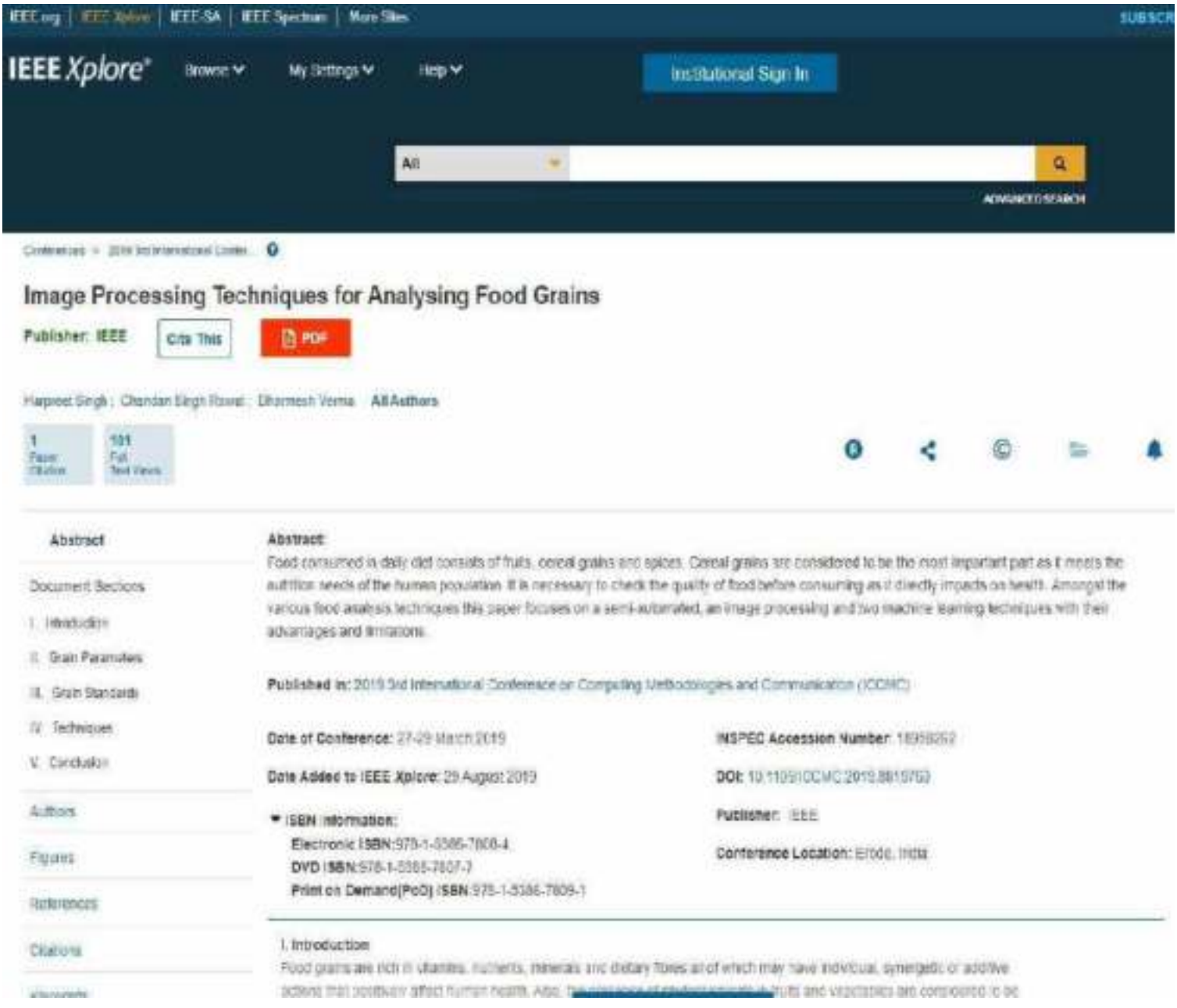
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Image Processing Techniques for Analysing Food Grains
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1
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Abstract
Document Sections
I. Introduction
II. Grain Parameters
III. Grain Standards
IV. Techniques
V. Conclusion
Authors
Figures
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Abstract:
Food consumed in daily diet consists of fruits, cereal grains and spices. Cereal grains are considered to be the most important part as it meets the
nutrition needs of the human population. It is necessary to check the quality of food before consuming as it directly impacts on health. Amongst the
various food analysis techniques this paper focuses on a semi-automated, an image processing and two machine learning techniques with their
advantages and limitations.
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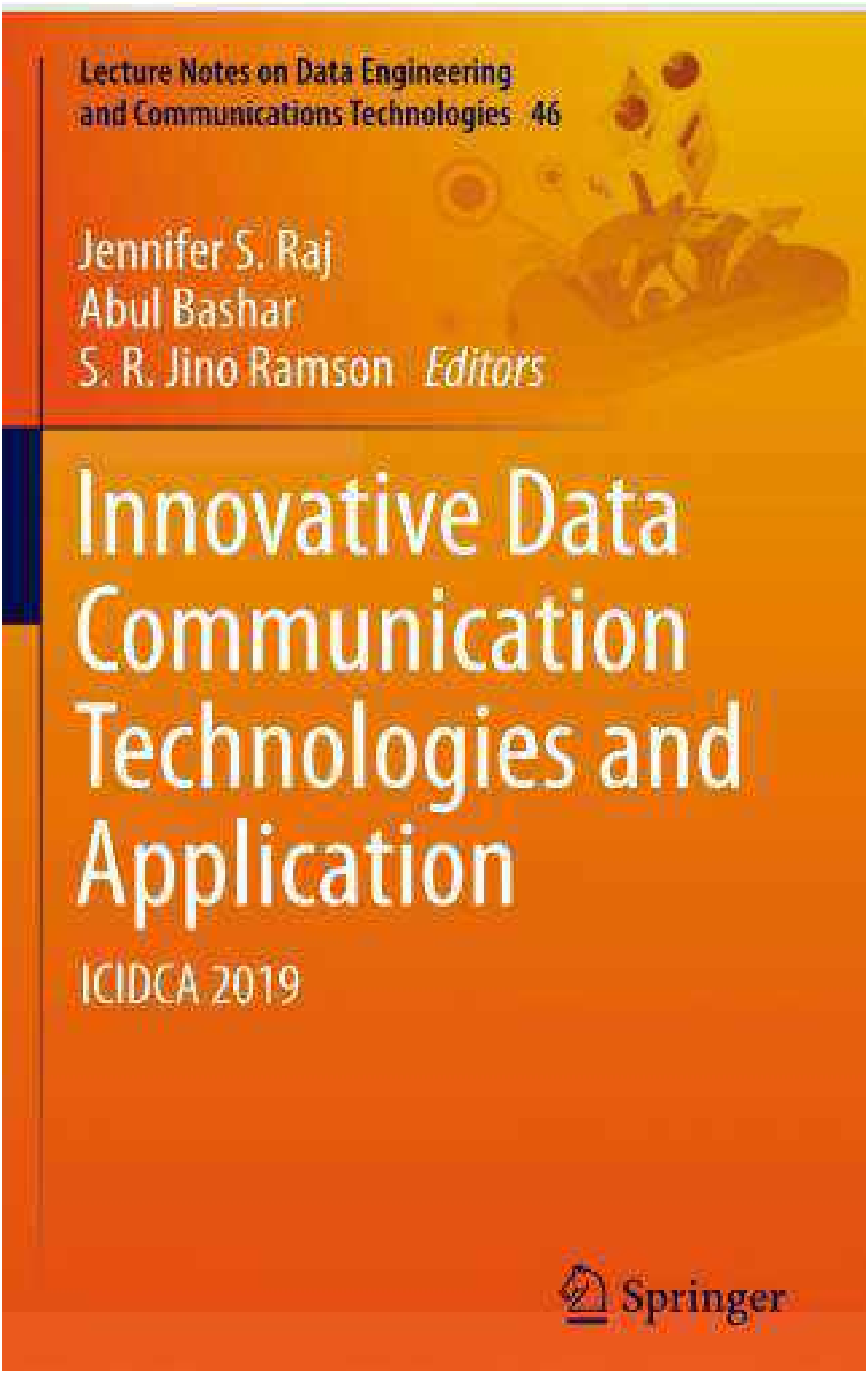
Conference Location: Erode, India
I. Introduction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Abul Bashar
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Person Re-identification from Videos Using Facial Features

Ankit Hendre(✉) and Nadir N. Charniya

Vivekanand Education Society Institute of Technology,
Chembur, Mumbai, India
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Abstract. To precisely re-identify a person is a daunting task due to various conditions such as pose variation, illumination variation, and uncontrolled environment. The methods addressed in related work were insufficient for correctly identifying the targeted person. There has been a lot of exploration in the domain of deep learning, convolutional neural network (CNN) and computer vision for extracting features. In this paper, FaceNet network is used to detect face and extract facial features and these features are used for re-identifying person. Accuracy of FaceNet is compared with Histogram of Oriented Gradients (HOG) method. Euclidean distance is used for checking similarity between faces.

Keywords: Re-identify · Deep learning · Convolutional neural network · Computer vision · Histogram of oriented gradients

1 Introduction

Humans can easily Re-identify a person by various parameters such as facial attributes/features, height, pose, gestures. It is difficult to mimic the same ability of humans to Re-identify a person using machines. As far as security and safety are concerned it is very important to each individual. For surveillance purpose, it is very important to continuously monitor the system, which by human means is not possible. The human monitoring surveillance system can also be biased. Making an intelligent surveillance system is a solution to it. Due to the recent advancement in the technology it possible to relate human intelligence in machines. With the help of machine learning, deep learning, and computer vision techniques we can make machines perform at a similar level like human's do.

Re-Identification (Re-ID) can be formulated to determine the resemblance between images of a person captured from various cameras. In Person Re-ID scenario pose, illumination, and clothing of a person can change over a lapse of time. Considering appearance features, gait or gestures for person Re-ID helps for short term only, but facial features do not change a lot over a course of time. Therefore, using facial features for Re-ID can give better results for long term usage. Due to the availability of high-speed computers, deep learning techniques are widely explored and practiced for computer vision, speech recognition, and medical image analysis [1]. This paper has experimented on HOG and FaceNet techniques for re-identifying persons.

J. S. Raj et al. (Eds.): ICIDCA 2019, LNDECT 46, pp. 380–387, 2020.
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Person Re-identification from Videos Using Facial Features

Authors | Authors and affiliations

Ankit Hendre, Nadir N. Charniya

Conference paper
First Online: 31 January 2020

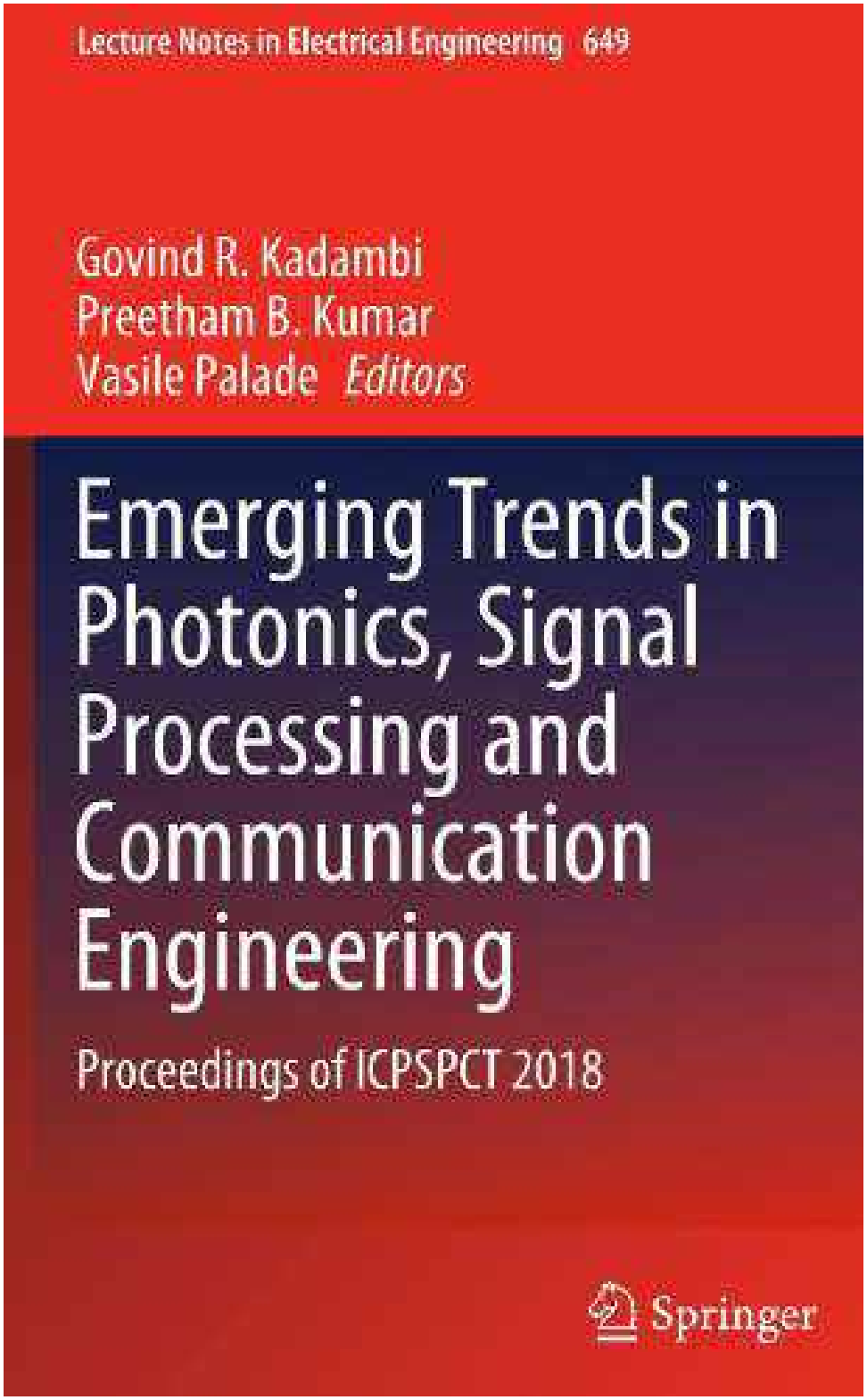
Part of the Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT, volume 46)

Abstract

To precisely re-identify a person is a daunting task due to various conditions such as pose variation, illumination variation, and uncontrolled environment. The methods addressed in related work were insufficient for correctly identifying the targeted person. There has been a lot of exploration in the domain of deep learning, convolutional neural network (CNN) and computer vision for extracting features. In this paper, FaceNet network is used to detect face and extract facial features and these features are used for re-identifying person. Accuracy of FaceNet is compared with Histogram of Oriented Gradients (HOG) method. Euclidean distance is used for checking similarity between faces.

Keywords

Re-identify Deep learning Convolutional neural network Computer vision Histogram of oriented gradients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Halftone Visual Cryptography for Color Images Using Error Diffusion and Direct Binary Search

Sandhya Anne Thomas and Saylee Gharge

Abstract Visual cryptography is a cryptographic technique which enhances the security of the image and uses the characteristics of human vision to decrypt encrypted images. Halftone Visual Cryptography uses halftoning techniques for converting the color image into binary images. The problem of encoding color image into *n* shares of meaningful halftone images is considered in this paper. The halftone techniques used are Error Diffusion and Direct Binary Search. Using these techniques, a secret pixel of a color image can be encoded into shares. These two techniques are compared on the basis of Peak to Signal Noise ratio (PSNR), Correlation, Universal Quality Index (UQI) and Structural Similarity (SSIM).

Keywords Visual cryptography · Halftone · Error diffusion · Direct binary search · Extended visual cryptography

1 Introduction

With the rapid development and increased need of computer and communication technology, more secret information are transmitted through the Internet. Therefore, protecting the secret information from being suspected and decrypted has become critical task. In 1994, a new information security technique called Visual Cryptography (VC) [1] was invented. VC is a cryptographic scheme in which decrypting of hidden images is done using human eyes. No previous knowledge of cryptography or computation is required for decoding which is the advantage of using in this technique along with high security offered using this technique. Visual cryptography scheme (VCS) [2] is a scheme which allows the encryption of a secret image into

S. A. Thomas (✉) · S. Gharge
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e-mail: saylee.gharge@ves.ac.in

G. R. Kadambi et al. (eds.), *Emerging Trends in Photonics, Signal Processing and Communication Engineering*, Lecture Notes in Electrical Engineering 649,
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Emerging Trends in Photonics, Signal Processing and Communication Engineering pp 99-109 | Cite as

Halftone Visual Cryptography for Color Images Using Error Diffusion and Direct Binary Search

Authors Authors and affiliations

Sandhya Anna Thomas, Sayiba Dhanga

Conference paper
First Online: 21 April 2021

143 Downloads

Part of the Lecture Notes in Electrical Engineering book series (LNEE, volume 640)

Abstract

Visual cryptography is a cryptographic technique which enhances the security of the image and uses the characteristics of human vision to decrypt encrypted images. Halftone Visual Cryptography uses halftoning techniques for converting the color image into binary images. The problem of encoding color image into *n* shares of meaningful halftone images is considered in this paper. The halftone techniques used are Error Diffusion and Direct Binary Search. Using these techniques, a secret pixel of a color image can be encoded into shares. These two techniques are compared on the basis of Peak to Signal Noise ratio (PSNR), Correlation, Universal Quality Index (UQI) and Structural Similarity (SSIM).

Keywords

Visual cryptography Halftone Error diffusion Direct binary search Extended visual cryptography

Data Forensics On Social Media

Publisher: IEEE

Cite This

PDF

Mannat Amit Doultani ; M. Vijayalakshmi All Authors

Abstract:
Authorship Attribution (AA), is a process to identify an author based on input text data given to the system based on its characteristics is a problem with a long history. In this project, we study the problem of authorship attribution for forensic purposes and present machine learning techniques and stylometric features of the author tweets. For this purpose micro-blogging site Twitter is taken for experimentation purpose. On this site people share their ideas, likes, dislikes, interest, opinion, thoughts in the form of short messages called tweets. More than thousand tweets are posted every second and the possibility of sensitive, illicit text sharing cannot be ignored. This system downloads live twitter tweets, and takes text file as the input. The text file contains tweets of random author. Our system finds that that tweet downloaded belongs to which author. For classification of the author some important features are used. Important features include calculation of smiley, calculation of stop words, calculation of punctuations, and calculation of similarity words. Basically this system is divided into two stage process, where in the first stage, stylometric information is extracted from the collected dataset and in the second stage classification algorithm is trained to predict authors of unseen text. The effort is to find out which combination of features help in accurate prediction of the author thus maximizing the accuracy of predictions with optimum amount of data.

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ISBN:978-1-5386-8076-6

Publisher: IEEE

Conference Location: Bombay, India

I. Introduction

The recent development in Information Communication technology (ICT) has made changes in every aspect of our life. These changes are taking us towards the dream of "Digital India". The positive influence of Digital world on knowledge, trade and business and communication is no doubt [illegible] side of it deteriorates its peaceful usage that is Digital [illegible] as any illegal activities

On Stability and Scalability Enhancement in WSN

Meera R Pillai ; Ranjan Bala Jain All Authors

Abstract:
Real-time applications integrated with WSN can be utilized in a hazardous area for long or short term, large or small scale, data monitoring or data collection. In such applications, stable network is required which will provide continuous services and less maintenance. So a higher stable clustering algorithm called Stability and Scalability Enhancement algorithm (SASE) is introduced. In SASE, probability and density conditions are used for clustering. In order to analyze the efficiency of the SASE algorithm, it is compared with the existing algorithms and the results show that SASE achieves 24% of higher stability compared to Mean Random PSO and 50% higher stable from other routing algorithms.

Published In: 2019 International Conference on Nascent Technologies in Engineering (ICNTE)

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Publisher: IEEE

Conference Location: Navi Mumbai, India

I. Introduction

Wireless Sensor Networks (WSN) can be defined as networks of tiny small, battery-powered, resource-constrained devices equipped with a CPU, sensors and transceivers

Detection of Faulty Integrated Circuits in PCB with Thermal Image Processing

Publisher: IEEE

Cite This

PDF

Akshay A. Sarawade ; Nadir N. Charniya All Authors

Abstract:
Developing a system which can be used for detection of faulty Integrated circuits (ICs) is one of the major challenge in electronic industry. Heating in ICs due to various reasons which may lead to degradation of performance and can cause serious hazardous effects in Printed Circuit Boards (PCB). Thermal image processing is one of the best non-contact, non-invasive method which can be used for IC fault detection. The paper aims towards detection of faulty ICs in PCB with help of thermal imaging camera and image processing techniques. Thermal images of sequence detector circuit for different fault conditions are collected. Image matching is achieved by comparing features of training images and test image using Speeded-Up Robust Features (SURF) algorithm. The system will indicate image belongs to particular fault class. The proposed method detects and classify possible faulty IC conditions with improved accuracy and can also help in early prevention remotely before complete circuit failure.

Published in: 2019 International Conference on Nascent Technologies in Engineering (ICNTE)

Date of Conference: 4-5 Jan. 2019 **INSPEC Accession Number:** 19245570

Date Added to IEEE *Xplore*: 02 January 2020 **DOI:** 10.1109/ICNTE44896.2019.8946061

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ISBN:978-1-5386-9167-0

Publisher: IEEE

Conference Location: Navi Mumbai, India

I. Introduction

In recent years, advancements in technology lead to a tremendous increase in capabilities and complexities of PCB. As the size of circuits goes on shrinking, it is impossible to know if any fault exists in ICs present on PCB just by visual inspection. Visual inspection method is quite time consuming and not accurate. The conventional methods can create problems in fault

Determination of Rice kernel Parameters using Image Processing

Publisher: IEEE

Cite This

PDF

Hargreet Singh Ghuman ; Chandan Singh Rawat ; Dharmesh Verma All Authors

Abstract:
Rice is the most widely consumed staple food across the world. Individual kernel investigation is important for the quality analysis of a given sample. The manual technique for the same is time consuming and tedious approach. The results of manual analysis depend on the skill, attitude and vengeance of a quality inspector. An image processing technique provides a quick and easy means of investigating rice parameters. This paper presents the procedure for calculation of length, width and colour of rice kernels using image processing. The manifestation of proposed grain analyser set-up capable of analysing grain sample from all possible side is explained. The classification of seeds according to Cambodia standard is also illustrated in this paper.

Published in: 2019 International Conference on Intelligent Computing and Control Systems (ICCS)

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DOI: 10.1109/ICCS45141.2019.9065605

Publisher: IEEE

Conference Location: Madurai, India

▼ ISBN Information:

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I. Introduction

Rice is the grain of the grass species Oryza glaberrima (African rice) or Oryza sativa (Asian rice). As a cereal grain, it is the most widely consumed staple food for a large part

Sample Papers
for
Academic Year: 2018-19

Available in the SSRN eLibrary: http://ssrn.com/link/2019-CTFC.html Engineering Research Network (EngRN)
Mahatma Education Society's Transactions and Journals' Conference Proceedings ISBN 978-93-82626-27-5

PRIVATE DIGITAL ASSISTANT FOR ALZHEIMER'S PATIENTS

Mr. Prashant Kanade (Computer Engineering Department, VESIT, Mumbai.)

Mr. Anish Vaidya, Mr. Shubham Parulekar, Mr. Dhiraj Sajnani, Mr. Mohit Sajnani

(Computer Engineering, VESIT, Mumbai)

Abstract:
Alzheimer's is a progressive disease in which a person experiences memory loss in varying stages of severity. Currently, there is no cure for Alzheimer's; palliative care is available for the patients. A solution to help Alzheimer's patients for scene recognition is proposed here. The scenes may include classrooms, offices, homes, etc. We use Convolutional Neural Networks in order to achieve our proposed goal.

Keywords:
Alzheimer, Digital Assistant, Scene Recognition
***Submitted on**: 15/10/2018*
***Revised on**: 15/12/2018*
***Accepted on**: 24/12/2018*
***Corresponding Author** Email: prashant.kanade@ves.ac.in
Phone: 9869710208*

I. INTRODUCTION

Alzheimer's is a type of dementia that causes problems with memory, thinking and behavior. Symptoms usually develop slowly and get worse over time, becoming severe enough to interfere with daily tasks [1]. Alzheimer's disease is one of the leading causes of deaths in the world. Alzheimer's patients require constant assistance for carrying out their day-to-day activities. The constant assistance is mainly in the form of help provided by the the patient's family, friends or a caretaker. In some situations, there is a possibility that human assistance is not readily available and the patient is in potential danger of self-harm. The Alzheimer's patient tends to become a social as well as an economic burden on the caretakers. There is a huge potential in using digital services to reduce the burden on humans involved in taking care of the patient.

Because of the progressive nature of this disease, it is seen that the degradation in cognitive abilities start with scene recognition and poor judgement in location familiarity [2]. The nature of this disease gives us insights on why some patients become confused in familiar environments before getting lost. This is why we have proposed a digital solution consisting of a scene recognition model, aided by Reverse Geocoding using Google Maps API [3]. Main features of this system include sending timely alerts and notifications to the patients to provide with assistance in scene recognition and location mapping. The system will send detailed and timely reports to the caretakers. It will also provide reminders regarding medicine and appropriate meal timings.

The model is based on the concept of Convolutional Neural Networks. The proposed system will be deployed as a mobile application. The system can be implemented using various techniques, but the choice of Convolution Neural Networks is optimal as our data consists of images.

Our paper provides insights about the problems faced by Alzheimer's patients and our proposed digital solution for the same.

Private Digital Assistant for Alzheimer's Patients

Proceedings 2019: Conference on Technologies for Future Cities (CTFC)

4 Pages • Posted: 26 Mar 2019

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Date Written: March 23, 2019

Abstract

Alzheimer's is a progressive disease in which a person experiences memory loss in varying stages of severity. Currently, there is no cure for Alzheimer's; palliative care is available for the patients. A solution to help Alzheimer's patients for scene recognition is proposed here. The scenes may include classrooms, offices, homes, etc. We use Convolutional Neural Networks in order to achieve our proposed goal.

Keywords: Alzheimer, Digital Assistant, Scene Recognition

Deep Learning based approach to suggest recipes

Himanshu Ravlani Jayesh Sata Vignesh Zamore R.L. Priya All Authors

Abstract:
This paper proposes an application that suggests recipes based on an image, clicked by the user, which contains multiple vegetables or fruits. This image can be captured in various environments, lighting conditions and from different angles. To detect multiple vegetables a state-of-art Convolutional Neural Network (CNN) called Faster-RCNN is used. Faster-RCNN is deployed on an android application which in turn interacts with server to fetch the possible recipes. The server retrieves the recipes from database, filters it and then returns the list to the client application.

Published in: 2018 International Conference on Smart City and Emerging Technology (ICSCET)

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I. Introduction

There have been many ideas on the Internet about detecting or recognizing what the given food is and what are its components. There are very few machine learning classification applications which differentiate between vegetables and fruits. Hence, the

IoT based Hydroponic Farm

Publisher: IEEE

Cite This | PDF

Nikita Bakhtar ; Varsha Chhabria ; Ishsaam Chougle ; Harsha Vidhrani ; Rupali Hande All Authors

Abstract:
The effects of global warming make more difficult for planting in an uncontrolled environment. In the traditional farming method, farmers require fine quality of soil with natural mineral strengths. It also requires working cost for plowing and removal of weeds and also needs a large amount of space and water. In the case of seasonal plants, the yield does not satisfy the customer needs and the expectation of farmers in productivity. For these reasons, a farming method which needs lesser requirements in cost factor and also it easy to maintain and control the important factors such as light, water level temperature, and humidity throughout the year is needed. This proposed work presents a Hydroponic farming; the method of growing plants without making use of sunlight & soil. In this method, the plants are grown with their roots exposed to the mixture of minerals with water instead of underground soil. This method is a type of indoor agriculture style which is independent of weather, and it also avoids the cost of plowing and labor works. Watering and controlling of humidity is done with the help of a microcontroller Kit connected to Wireless sensor network with internet which senses the humidity, temperature and water level. With the help of this IoT technology, the real-time status of the plant's growth could be monitored by the authorized person from a remote location.

Published in: 2018 International Conference on Smart Systems and Inventive Technology (ICSSIT)

Date of Conference: 13-14 Dec. 2018

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INSPEC Accession Number: 18796222

DOI: 10.1109/ICSSIT.2018.8748447

Publisher: IEEE

Conference Location: Tirunelveli, India

I. Introduction

The word "Hydroponic" defines as any means to grow plants via a medium that does not include the use of soil but involves inorganic nutrients or nutrient solution. The system is a

3D Face Generation from Sketch Using ASM and 3DMM

Publisher: IEEE

Cite This

PDF

Heba Nomani ; Shanta Sondur All Authors

Abstract:
The major challenge that has not received much attention in automatic sketch to image face recognition is to achieve age invariance. 3D face modeling using image has been used to overcome many challenges of face recognition, as it is invariant to changes of viewpoint, illumination, background clutter and occlusions. Keeping all the challenges associated with sketches, 3D modeling and automatic sketch to image face recognition, we propose a method for reconstructing a 3D face model using only one frontal face sketch. The methodologies used for doing so are Active Shape Modeling (ASM) and three Dimensional Morphable Model (3DMM). ASM is used for getting the landmark points on the face based on the shape while 3DMM is used for reconstructing the 3D face model by using those points.

Published in: 2018 International Conference On Advances in Communication and Computing Technology (ICACCT)

Date of Conference: 8-9 Feb. 2018

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INSPEC Accession Number: 18249519

DOI: 10.1109/ICACCT.2018.8529358

Publisher: IEEE

Conference Location: Sangamner, India

I. Introduction

Automatic sketch to image face recognition has important application for law enforcement. Challenges associated in such recognition are to achieve age invariance, handling different pose and illumination. Recent researches has focused on matching different sketches (viewed sk... posite sketches) with images but the area of age in... photo sketch recognition still remain unexplored [1]-[4]. Keeping all the challenges associated with sketches and sketch to image face

High performance AC coupled Biomedical Signal Processing System using New Technique of Impedance Steering with Synchronous Sampling and A/D Conversion

Publisher: IEEE

Cite This PDF

Nilima Warke ; J.M. Nair ; P.P. Vaidya All Authors

Abstract:
This paper proposes a new method named as impedance steering to improve the frequency response of the AC coupled instrumentation amplifier (IA) which is widely used for processing of biomedical (BM) signals. The method makes use of steering a high impedance in chain of resistors used at the input of IA with balanced AC coupling to achieve very high impedance during amplification of the input voltage. This results in uniform frequency response even at the lower frequencies which is major concern for processing of BM signals. This impedance steering technique can be used at input of any IA to construct a standalone amplification system for BM signals. However, in many applications, the output of IA is digitized using high resolution A/D conversion. A new method named a synchronized sampling and A/D conversion has been proposed in this paper for such applications. This method makes use of sampling and digitization of the signal which is synchronized with the process of steering the impedances to obtain high performance AC coupled BM signal processing system. The circuit has been designed and simulated using NI Multisim software, version 12. The results obtained using this method confirms the efficacy of the method for obtaining high performance signal processing required for BM signal applications. Though the system is preliminary designed for BM application, it can be used for wide range of signal processing.

Published in: 2018 Second International Conference on Electronics, Communication and Aerospace Technology (ICECA)

Date of Conference: 29-31 March 2018

Date Added to IEEE *Xplore*: 01 October 2018

INSPEC Accession Number: 18144855

DOI: 10.1109/ICECA.2018.8474618

Publisher: IEEE

Conference Location: Coimbatore, India

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ISBN:978-1-5386-0966-8

I. Introduction

Instrumentation amplifier (IA) is used in biopotential measurement system to provide high

Halftone Visual Cryptography for Grayscale Images Using Error Diffusion and Direct Binary Search

Publisher: IEEE

Cite This

PDF

Sandhya Anne Thomas ; Saylee Gharge All Authors

Abstract:
Visual Cryptography(VC) provides prefect security and the decoding is done without the help of a computer device. Halftone visual cryptography (HVC) uses halftoning techniques to produce shares, which maintains good contrast and security also increases the quality of shares. HVC increases the region of VC by the inclusion of digital halftoning technique. The problem of encoding and transmitting a secret message with high security is discussed and implemented by using meaningful halftone shares. Using Error diffusion or Direct binary search a secret message of a grayscale can be encoded into shares. Simulation results show several illustrative examples with its parameters.

Published In: 2018 2nd International Conference on Trends in Electronics and Informatics (ICOEI)

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Publisher: IEEE

Conference Location: Tirunelveli, India

I. Introduction

Visual cryptography(VC) was developed and initiated in the early ninety at the Eurocrypt conference. VC is an inventive cryptographic scheme, which can decrypt hidden images without any cryptographic calculation [1]. There is a wide increase in transmission of data over network for instant access or distribution. Data is exist in different forms like text, image, audio and video. Image is one of the most important type of data transmission. Researchers have been using visual cryptography schemes(VCS) for transmission of secret messages in the form of share images. There are various ways by which data can be guarded such as image hi... authentication and so on. The shortcoming of these... image is modified in a...

Conference Paper | PDF Available

ICT Application for Academic Enhancement of Student's Learning Process

March 2019

Conference: International Conference on ICT For Organizational Effectiveness Organised By NCRD's Sterling Institute of Management Studies from 14th to 16 th March, 2019. Pagono: 91-93 · At: Mumbai

Authors:

Dhanamma SHANKAR Jagli
Vivekanand Education Society's Institute ...

ISBN : 978-93-5346-781-5

ICT Application for Academic Enhancement of Student's Learning Process

Prof. Dhanamma Jagli
V.E.S.Institute of Technology, Chembur, Mumbai.
Yogesh Jeswani - Student (MCA)
V.E.S Institute of Technology, Chembur, Mumbai.

Abstract:
The future of the education system will restructure through information communication technology (ICT), which is a comprehensive approach to innovate education systems, methods, and management. The need for Information Communication Technology (ICT) in education today cannot be over emphasized. In this paper analyzed usage of ICT application in the academics for enhancing students' performance. As a part of ICT our institute made good drive available for students with unlimited storage so that students are using google drive services like documents, google sheets, presentation and forms efficiently for sharing lecture notes, coordinating work for projects and, submitting assignments on time etc. This work is analyzed thoroughly and came up with strong opinion that students should use google drive services for their academic purpose.

Key word:
Information Communication and Technology (ICT), Academic, Students, Google Drive

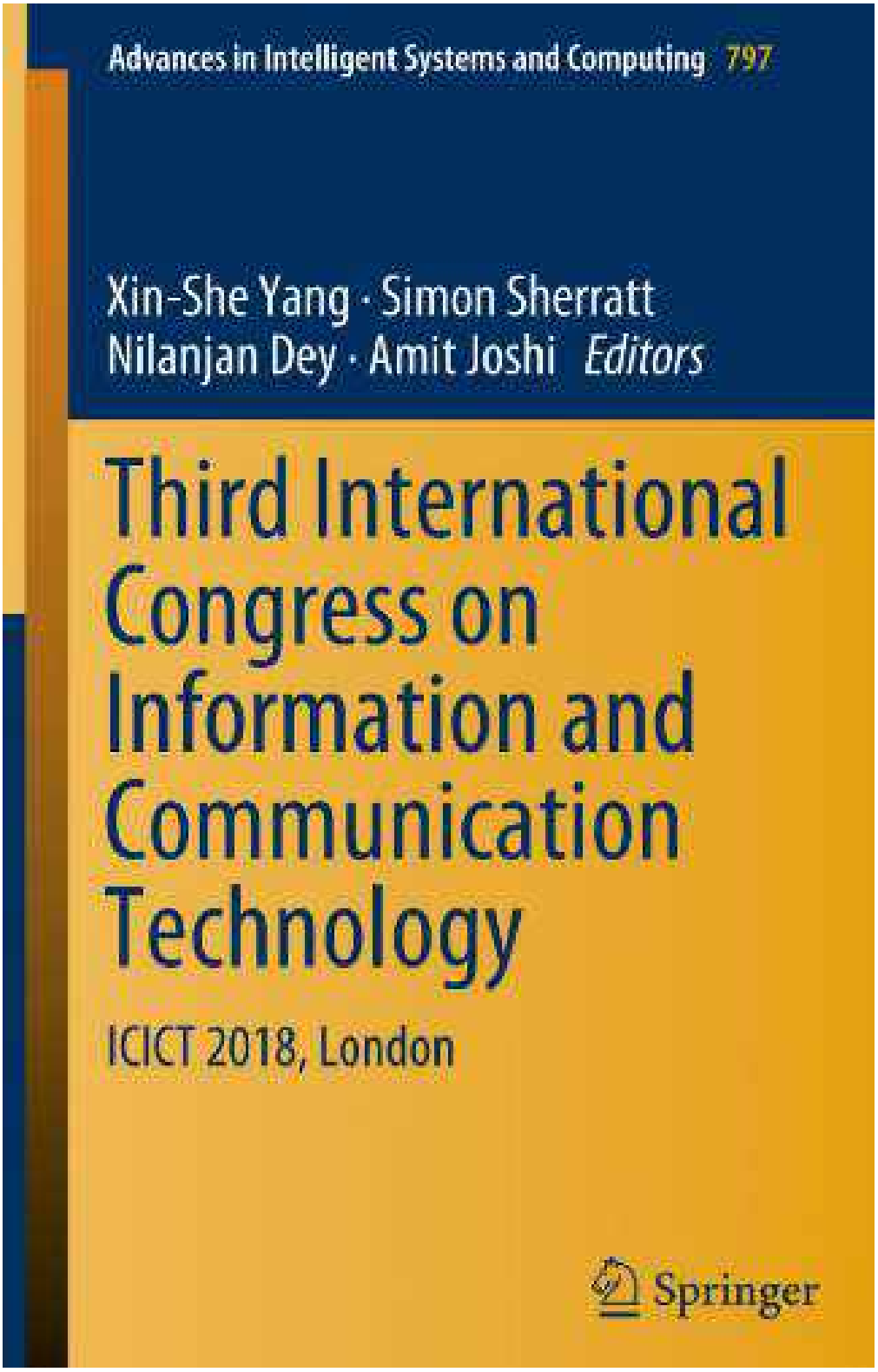
I. Introduction

The future of the education system will restructure through information communication technology (ICT), which is a comprehensive approach to innovate education systems, methods and management. The new paradigm of ICT in educations is smart services, which enhances the education efficiency, effectiveness, and productivity. Information and communications the future of the education system will restructure through information communication technology (ICT), which is a comprehensive approach to innovate education systems, methods and management. The new paradigm of ICT in educations is smart services, which enhances the education efficiency, effectiveness, and productivity. Information and communications technology (ICT) refers to all, the technology used to handle telecommunications, broadcast media, intelligent building management systems, audiovisual processing and transmission poses an immense challenge that the education system in general and the classroom teachers in particular need to address. The need of the hour is to bridge the gap between how students live and learn. For the current multitasking, multifaceted, technology driven and diverse natured learners, getting education does not merely mean getting grades nor does it imply that the teacher's sole professional role is to 'give information'. Rather, the nature and needs of the learner makes it imperative not only for the system at large, but also the teachers to develop multiple teaching-learning objectives that will enhance a learner's level-of-learning and at the same time also equip him her with crucial employability skills such as analytical/critical reasoning, creativity, communication, ethical decision-making etc.

I. Issues Encountered Without ICT.

a. Teacher quality:

Teachers are vital to the education process, and their training and continuous development are crucial in improving the quality of education. How teachers are prepared for teaching is a critical indicator of education quality. The quality of teachers remains a problem in many poor countries. Investment in teacher preparation and support is a prerequisite for educational quality. Preparing teachers for a changing world means equipping them with adequate subject knowledge, effective teaching practices, an understanding of technology and the ability to work with others (colleagues, management, and parents). Research indicates that large proportions of primary school teachers lack adequate academic qualifications, training and content knowledge, especially in developing countries. This indicates that much pre-service training may be ineffective. Teachers' formal qualifications, however, may not reflect teacher quality as adequately as the ability to make the best use of learning materials, learners' work and their own subject knowledge. Through quality education, students are allowed to reach their fullest potential in terms of cognitive, emotional and creative capacities. Poor instruction is a significant source of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Medical Image Enhancement Using Hybrid Techniques for Accurate Anomaly Detection And Malignancy Predication

Shilpa Joshi and R. K. Kulkarni

Abstract Advanced pictures that got by any image procedure are routinely rotted by commotion as a result of various wellsprings of blocks that impact the estimation process. A shared objective crosswise over frameworks is to build the determination however much as could reasonably be expected to accomplish genuine isotropic picture which ought to be clearer, obscure free, and less uproarious. Different diffusion-based filtering strategies have been utilized, anisotropic diffusion (AD) or nonlinear diffusion (ND), which diminishes the spot/speckle noise in medical pictures. This proposition particularly in view of speckle reduction diffusion filter (SRDF), followed by utilization of super-resolution (SR) on these sifted and fragmented medicinal pictures of various imaging modalities combined advances like filtering, determination, and improvement helps in recognizing the variation or abnormality from the norm if any present in the picture. With the assistance of machine learning (ML), one can anticipate the status of the variation from the norm precisely. Along these lines, the objective of documenting high-definition (HD) pictures from minimal effort methodology is accomplished agreeably.

Keywords Medical image modalities · Image preprocessing · Super-resolution Feature extraction · Malignancy prediction

1 Introduction

Medical imaging not only provides vital information on anatomy and organ function but in addition it helps in detecting diseases and its states. Moreover, it is utilized for organ delineation and a pathway for identifying abnormalities and deformity

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Third International Conference on Information and Communication Technology pp 951-961 | Cite as

Medical Image Enhancement Using Hybrid Techniques for Accurate Anomaly Detection And Malignancy Predication

Author Authors and affiliations

Shilpa Joshi, R. K. Kulkarni

Conference paper
First Online: 23 September 2019

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Abstract

Advanced pictures that got by any image procedure are routinely rotted by commotion as a result of various wellsprings of blocks that impact the estimation process. A shared objective crosswise over frameworks is to build the determination however much as could reasonably be expected to accomplish genuine isotropic picture which ought to be clearer, obscure free, and less uproarious. Different diffusion-based filtering strategies have been utilized, anisotropic diffusion (AD) or nonlinear diffusion (ND), which diminishes the spot/speckle noise in medical pictures. This proposition particularly in view of speckle reduction diffusion filter (SRDF), followed by utilization of super-resolution (SR) on these sifted and fragmented medicinal pictures of various imaging modalities combined advances like filtering, determination, and improvement helps in recognizing the variation or abnormality from the norm if any present in the picture. With the assistance of machine learning (ML), one can anticipate the status of the variation from the norm precisely. Along these lines, the objective of documenting high-

Optimization of One Dimensional Photonic Crystal Structure with Light Reflection Characteristics

Publisher: IEEE

Cite This

PDF

S Amuthavalli ; Manisha Chattopadhyay All Authors

Abstract:
Photonic crystals are optical materials with repeating structures. This paper reviews the light reflection characteristics of one dimensional (1D) photonic crystals with defects in the visible region. Designing the 1D photonic crystal for reflection based applications such as mirrors and reflection coatings, knowledge of photonic bandgap and the reflection characteristics in the periodic structure is essential. Modeling of flow of light in photonic crystals are studied with Comsol simulations which is based on FEM method. An observational study on reflection properties of 1D photonic crystal reveals the impacts of periodic layer thickness, refractive index, and periodicity on light. The reflection spectrum of the photonic crystal structure with defects have been analyzed and a deep understanding of the photonic crystal with defect has been achieved. In this paper it is proposed that consistently high reflection can be achieved along with the structure optimization using defects.

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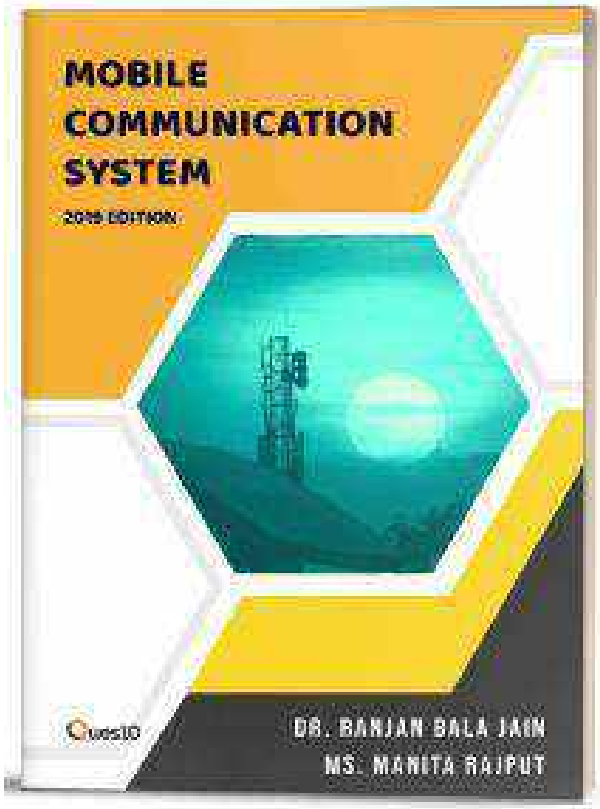
Conference Location: Tirunelveli, India

I. Introduction

Photonic crystal (PC) has opened an opportunity for advanced photonic component due to its adaptability in designing for any wavelength. Photonic crystals are arrangement of materials with different refractive indices periodically. In this structure the refractive index



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Mobile Communication System

Team Ques10

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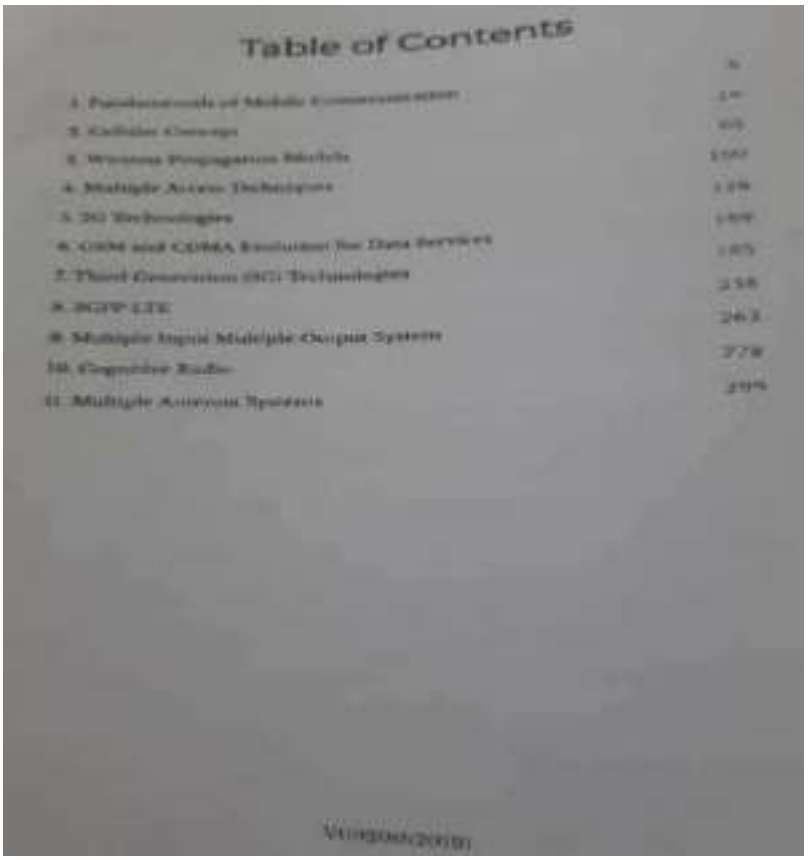

Mobile Communication System: by Ques10

Fundamentals of Mobile Communication

Content

1.1 Introduction to Wireless Communication

48236

Wireless Communication is the fastest growing and most vibrant technological areas in the communication field. It is a method of transmitting information from one point to other, without using any connection like wires, cables or any physical medium.

Generally, in a communication system, information is transmitted from transmitter to receiver that are placed over a limited distance. With the help of wireless Communication, the transmitter and receiver can be placed anywhere between few meters (like a T.V. Remote Control) to few thousand kilometres (Satellite Communication).

The communication among devices is established by electromagnetic waves. The Frequency, Wavelength and various band names of Electromagnetic spectrum is as shown in Table 1.1:

Table 1: The Electromagnetic spectrum

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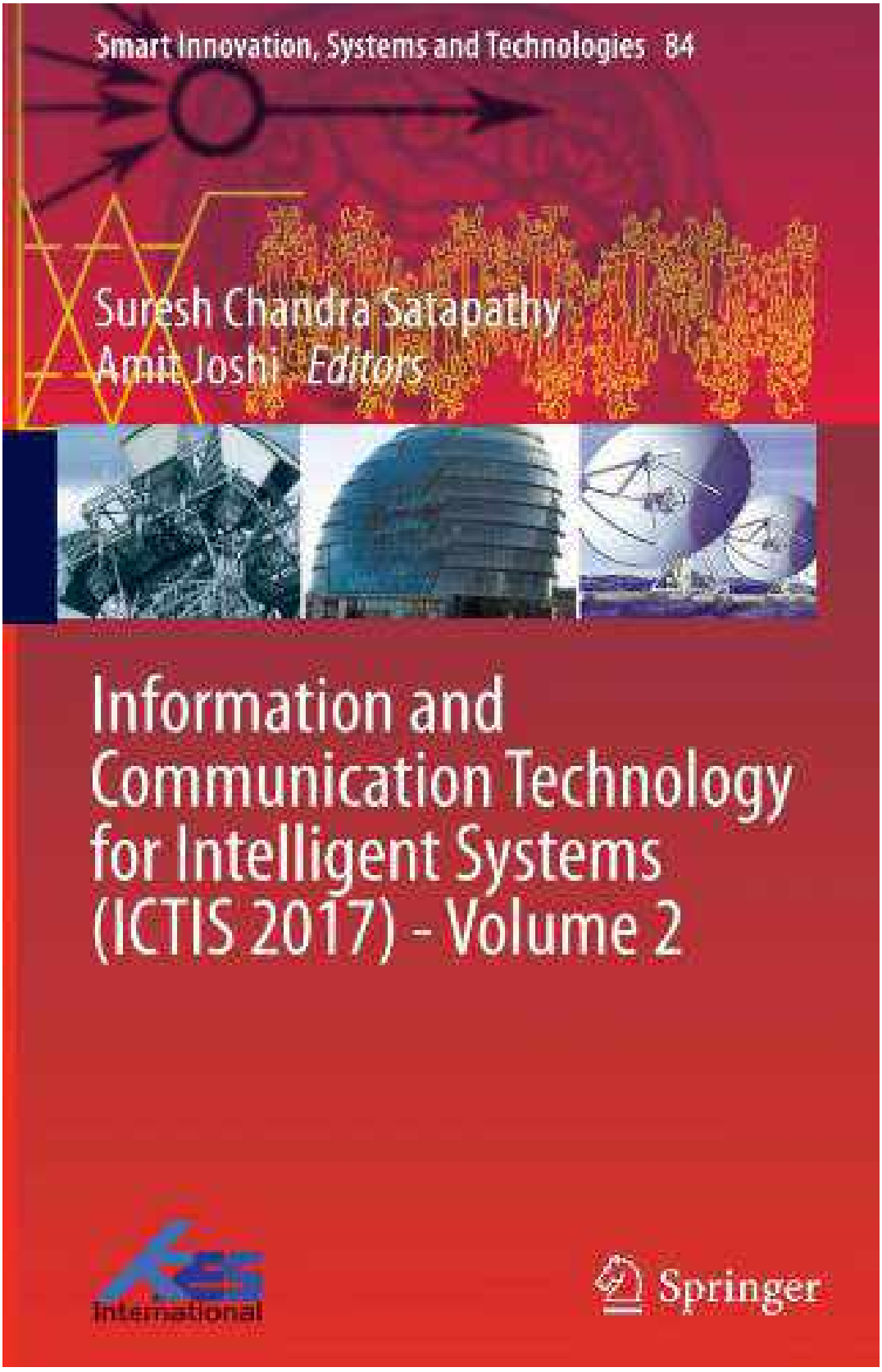
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"En-SPDP: Enhanced Secure Pool Delivery Protocol" for Food Delivery System

Havan Somaiya, Radhakrishna Kamath(✉), Vijay Godhani, Yash Ahuja, and Nupur Giri

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Abstract. With increasing boom in the tech market many online food delivery systems have come up but almost all of them have some or the other flaw such as restriction on orders or extra charges. Hence, the work presented in this paper proposes use of enhanced version of SET protocol and a delivery protocol which, aims at saving conventional resources such as human resources and fuel and also time by using pool delivery mechanism.

Keywords: Secure Electronic Protocol (SET) · Triple signature · Secure Electronic Payment (SEP) · 3 Domain secure (3D secure)

1 Introduction

In India, more than 12.5 billion of revenue is contributed by food delivery market alone. However out of this share, more than 7% is contributed by the online food delivery services. It has been observed that 50,000 restaurants in India provide home delivery, which indicates a very high potential market in online food delivery space [1].

People have become habituated and feel more comfortable in placing food orders online as it is easy and quick way to order and because of this trend a lot of restaurants are gaining good returns.

Some of the major contenders in online food ordering market are Foodpanda, Zomato and Swiggy. They provide online food ordering services to their customers. However, there are some problems associated with each of these.

- Minimum order policy;
- Minimum order cost policy;
- High revenue;
- Delivery charges [1, 6].

The above problems are solved by En-SPDP system as -

1. It makes use of pool delivery mechanism which reduces the constraint on resources such as human workforce and fuel, as a result of which delivery charges and minimum order policy won't be applicable.

S.C. Satapathy and A. Joshi (eds.), *Information and Communication Technology for Intelligent Systems (ICTIS 2017) - Volume 2*, Smart Innovation, Systems and Technologies 84, DOI 10.1007/978-3-319-63645-0_62

International Conference on Information and Communication Technology for Intelligent Systems

ICTIS 2017: Information and Communication Technology for Intelligent Systems (ICTIS 2017) - Volume 2 pp 554-566

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"En-SPDP: Enhanced Secure Pool Delivery Protocol" for Food Delivery System

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Abstract

With increasing boom in the tech market many online food delivery systems have come up but almost all of them have some or the other flaw such as restriction on orders or extra charges. Hence, the work presented in this paper proposes use of enhanced version of SET protocol and a delivery protocol which, aims at saving conventional resources such as human resources and fuel and also time by using pool delivery mechanism.

Optimized rescue system for accidents and emergencies

Publisher: IEEE

Cite This PDF

Sagar Wadhwa | Preeti Wadhwa | Sahil Mirchandani | Richard Joseph All Authors

Abstract:
As the rapid growth of technology and infrastructure, it has increased traffic hazards, road accidents and hazardous situations which cause huge loss of health and life because of the late arrival of emergency services. Factors that cause delay in arrival are lack of coordination between emergency services and large traffic. In this paper, we propose a system that will provide an optimized solution to this drawback by coordinating between emergency facilities to increase efficiency of rescue process. It requests for immediate help in case of any emergency situations with a single click of a button. Our system will verify all the request by taking real-time snapshots of the incidents. These snapshots will then be processed in central server for verification purposes. This system will then contact the nearest hospitals to the site of the emergency and route the ambulance using shortest path algorithm. To reduce the time for the victim to reach hospital, our application will also inform the police with the route of ambulance, so that they could make a way for the ambulance to help the patient in reaching the hospital within the golden hour period to avoid any casualties. Our system targets the crucial problem, loss of life late due to inefficient services in case of emergencies. This system will increase the life expectancy in incidences and will help to reduce the time required for the victims to reach the hospitals.

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INSPEC Accession Number: 17650634

DOI: 10.1109/CESYS.2017.8321139

Publisher: IEEE

Conference Location: Coimbatore, India

I. Introduction

As population of the world is increasing day by day in countries like India and China traffic hazards, road accidents and hazardous situations are getting more and more prevalent. Increased vehicle density has led to many road accidents [2]. There is a huge loss of life due to late arrival of [illegible] reason is the delay in the arrival of ambulance in the [illegible] This delay is mainly caused due to

Speed Control of Brushless DC Motor using Microcontroller

Conference: Communication and Power Engineering
Author(s): Shobhit Khandare, Simran C.Daswani, Kiran Chhatwani **Year:** 2016
Grenze ID: 02.CPE.2016.9.504 **Page:** 11-15

Abstract

In this paper we are designing a low cost microcontroller based speed control of \nBrushless DC motor. Brushless DC motor has various industrial applications like Linear\nmotors, Servo motors, Drilling etc. Brushless DC motor uses a permanent magnet external\nrotor, three phase of driving coils, one or more Hall Effect devices are used to sense the\nposition of the rotor. This system provides a very precise and effective speed control. [5].

<< BACK

CPE - 2016

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RELATED SUBJECTS:
Computational Mathematics, Computational Intelligence , Computer Modeling, Energy storages, Power Electronics Controllers for Power Systems

CONFERENCE VENUE:
Bengaluru, India

INDEXING:

Novel filter designing for enhancement of medical images using super-resolution

Publisher: IEEE

Cite This

PDF

Ashwini S. Sawan ; Sukalp S. Kamdi ; Ghiren M. Khatri ; Deepti S. Umekar ; Chirag D. Bohra All Authors

Abstract:
Medical Imaging plays a vital role in the diagnosis and treatment of any ailment or disorder. The resolution of medical images thus becomes crucial in obtaining accurate details for diagnosis and treatment. X-ray and Magnetic Resonance Imaging Technique are the two acquisition techniques which are widely used in medical imaging. The images acquired by these processes are of low resolution. But due to the limitations of the equipment cost and complexity, the resolution of the images cannot be improved in situ. The method of Super-resolution uses either a single low resolution image or a set of multiple low resolution images improves the image resolution, PSNR (Peak Signal to Noise Ratio) and the quality Index. In the last few decades many super-resolution methods were proposed. These methods had limitations in their utility due to the assumed model of data and noise. In this paper, we have proposed a method of enhancement of knee image taken using X-ray, MRI using TV regularization, shock, median, frost and wiener filter for noise removal. We also calculate the Joint Space Distance which becomes important in treatment of knee ailments like Rheumatoid Arthritis.

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INSPEC Accession Number: 17615439

DOI: 10.1109/ICSPC.2017.8305849

Publisher: IEEE

Conference Location: Coimbatore, India

I. Introduction

Medical images are mostly of lower contrast and resolution. Imaging systems like X-rays, Ultrasound, MRI scan, etc. have their own characteristic resolution. Each of them aim to increase resolution and achieve more accurate information. One of the aims of medical imaging is to detect the fractu[illegible]part in any part of the body. This analysis is affected by image quality. However, the medical images acquired [illegible]

A stochastic convergence analysis of random number generators as applied to error propagation using Monte Carlo method and unscented transformation technique

Publisher: IEEE

Cite This | PDF

Sangeetha Prasanna Ram ; S. Ganesan ; Jayalekshmi Nair All Authors

Abstract:
This paper compares the stochastic convergence of the Uniform Random number generators of two simulation software namely Matlab and Python and establishes the significance in choosing the right random number generator for error propagation studies. It further discusses about the application of Gaussian type of these random number generators to nonlinear cases of Error propagation using the Monte Carlo method and unscented transformation technique by means of a nonlinear transformation of one dimensional random variable of nuclear data.

Published in: 2017 IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (SPICES)

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INSPEC Accession Number: 17318586

DOI: 10.1109/SPICES.2017.8091351

Publisher: IEEE

Conference Location: Kollam

I. Introduction

The error in a quantity may be thought as a variation or change in the value of that quantity. The output variables which are functions of input variables are calculated using mathematical models and any [illegible] can result in errors or uncertainties in the output [illegible] measured directly and indirectly. In order to estimate the error in the output variables the error propagation

Authors

Smart sensor using function approximation

Publisher: IEEE

Cite This

PDF

Kader B T Shaikh All Authors

Abstract:
This paper reports a neural network (NN) implementation of function approximation. Function approximation (aka, nonlinear regression) identifies input-output relationship from given input-output data set. Concept of function approximation is applied to develop a smart position sensor. Smart position sensor consists of three standard sensors that are coupled with a neural network to produce an estimate of the location of an object in one dimension. MATLAB is used to construct and train the multi layer feed forward neural network. Hardware implementation of trained neural network is done on Arduino Uno microcontroller board.

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INSPEC Accession Number: 17504461

DOI: 10.1109/RTEICT.2017.8256793

Publisher: IEEE

Conference Location: Bangalore, India

I. Introduction

There are ample of real world applications where we need to learn a mapping between input and an output space. Many situations exists where an explicit formula (or function f) relating pairs of input-output data in the form of (x, f(x)) is unavailable. Approximation theory could be utilized here to [illegible] as an associative memory and estimate output [illegible] generalizes when

'Ting': A PhoneGap based Android application for sharing personal and device information amongst social circles

Publisher: IEEE

Cite This | PDF

Geocey Sibey ; Bhagyesh Save ; Shilpa Das All Authors

Abstract:
The advancement in technology has led to the development of innovative things that only a few years back were mere fantasy. With the way technology is evolving, the dependency of people on it to solve everyday problems should not come as a surprise. One such problem that is a huge concern all over the world at present is personal security. At a time when the humanity of humans is at question, everyone is in constant fear of the whereabouts of loved ones. The application stores of different platforms are filled with safety applications that aim at being the personal watchdogs of the users. Having said this, these applications are lacking in a crucial aspect, the sharing of time critical information with others. 'Ting-stay connected' is an application that focuses on PINGING vital information among a circle of users such that each member in a circle has the personal information of other members in their circle and can use this information to save the other from a tricky situation. Ting helps the users to stay connected by performing mutual tasks and continuous sharing of information such as current location, battery status and call logs with their trusted set of contacts without any interaction with the application. The application also provides a unique feature called EMERGENCY ALERTS which enables the user to inform family or friends about the problematic situations he or she might be facing. As the application is developed using Cordova and PhoneGap technology, it can be implemented in various platforms like IOS, Android, Blackberry and Windows easily. The paper focuses on the design of TING, its implementation and further compares TING with some existing popular personal safety software.

Published in: 2017 International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT)

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INSPEC Accession Number: 17789288

DOI: 10.1109/MSPCT.2017.8363978

Publisher: IEEE

Conference Location: Aligarh, India

I. Introduction

Safety of people, no matter their age, gender and ethnicity, is a cause of great concern in today's cut throat world. Many a times people face situations wherein it seems impossible for them to inform their family or friends about their location, battery status or similar information. This calls for a safety application that will be a solution to all safety related issues. A study on Violence Against Women (VAW) made in 2014 insists that technology can playa vital role in preventing VAW [1]. Ting is an application which once installed and made ready to use, immediately starts its job of continuously 'pinging' the current location, call logs and battery status to the preferred circles. It consists various features which include the formation and management of multiple circles. These circles are

Drunk driving and drowsiness detection

Publisher: IEEE

Cite This

PDF

Nadir N. Charniya ; Vivek R. Nair All Authors

Abstract:
Development of safety features to prevent drunk and drowsy driving is one of the major technical challenges in the automobile industry. Driving while being drunk or drowsy is a major reason behind road accidents especially in the modern age. Driving when drowsy can lead to higher crash risk than being in alert state. Therefore, by using assistive systems to monitor driver's level of alertness can be of significant help in prevention of accidents. This paper aims towards the detection of driver's drowsiness using the visual features approach along with drunk detection using alcohol sensor. Driver drowsiness is based on real-time detection of the driver's head, face and mouth, where-in HAAR-Cascade classifier for face and eye detection and template matching in the mouth region for yawning detection. The system will also have an alcohol detection sensor which will determine whether the driver is drunk or not, thus covering the major reasons behind road accidents.

Published in: 2017 International Conference on Intelligent Computing and Control (I2C2)

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INSPEC Accession Number: 17650825

DOI: 10.1109/I2C2.2017.8321811

Publisher: IEEE

Conference Location: Coimbatore, India

I. Introduction

Driving while drowsy or in drunk state, are the two main reasons for traffic accidents and the related financial losses. Researchers have been working on designing driver drowsy monitoring systems over the last decade. Though, there have been numerous improvements in driver safety, yet a significant number of serious accidents still occur all

Gabor feature extraction of mixed fingerprint template

Publisher: IEEE

Cite This PDF

Shancymol Sojan ; R. K. Kulkarni All Authors

Abstract:
Biometrics based authentication systems face the major challenge in securing the template. Although multi-modal biometric techniques and cryptographic techniques offer security but they can be easily compromised. This paper explores the possibility of combining features from the same biometric trait (fingerprints) i.e. keeping it unimodal but still offering the same security as that of the combined biometrics. In this paper, using minutiae and orientation features from two different fingerprints, a new unique mixed fingerprint template is generated. The advantage of creating the mixed template is that it is cancellable and serves as a new virtual identity. Further Gabor feature of the mixed template is extracted before matching to reduce the error rate. Testing the templates is done using 2 methods, viz. correlation based and minutiae based. These two methods were effective in identifying the templates accurately. The FAR=0.08% and FRR=0.1%.

Published in: 2017 IEEE International Conference on Electrical, Instrumentation and Communication Engineering (ICEICE)

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Publisher: IEEE

Conference Location: Karur, India

I. Introduction

Biometric authentication based systems are gaining popularity due to the inherent advantage of security, privacy and uniqueness. They have a high end over passwords and PINS due to a comparative lower risk of being stolen or misused. Different biometric traits like fingerprint, iris, face, palm, gesture, gait etc can be used in various applications system accessibility [1], [2]. A used due to uniqueness, diversity, revocability and security. Due to proper protection of the template

Sample Papers
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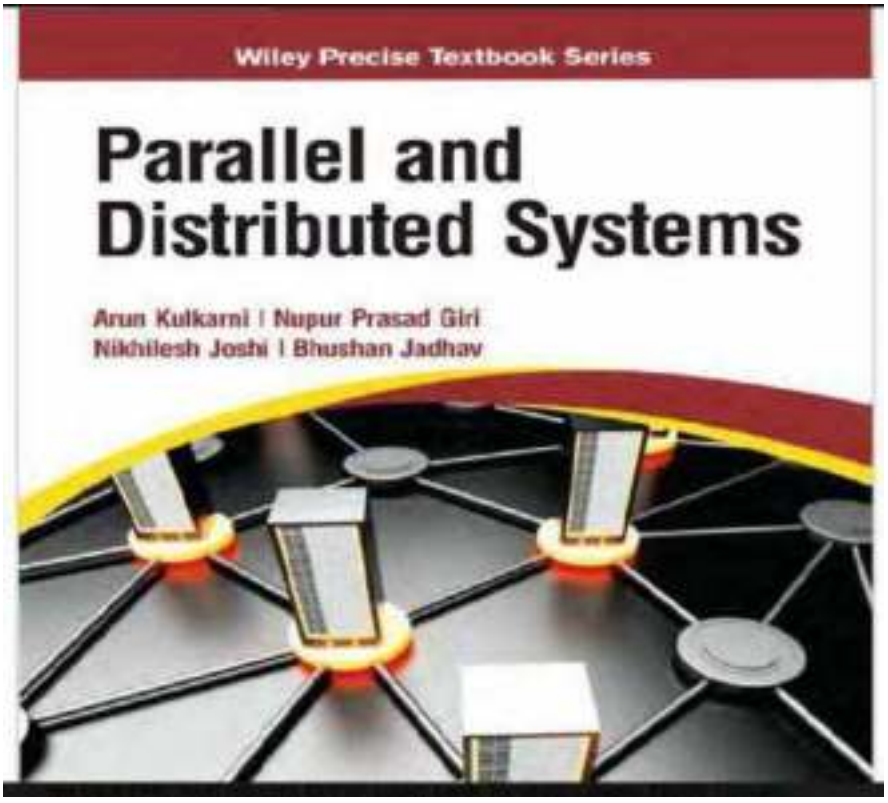

Parallel and Distributed Systems

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Contents

Introduction to Parallel Computing

LEARNING OBJECTIVES

After reading this chapter, you will be able to understand:

- Concepts of parallel computing.
- Different parallel architectures.
- Performance metrics for parallel computers and processors.
- Different parallel programming models.
- Parallel algorithm and parallelism.

1.1 Introduction

In the modern era, most of the real-time applications require maximum computation speed. Today, everyone is passionate about the applications to be executed with high performance and at low cost. Due to the limitation on speed of execution by sequential computer the key to above mention leads to parallel computing. Also with the development in technology and its cost effectiveness it has become possible to think of using number of high speed processors for computation to execute the given task. The recent improvements in technologies inherited many undistinguished features which are required for parallel computing. The technological progress in hardware and software is discussed below.

1. **Hardware:** When computers were initially launched, people used to work with mechanical devices, vacuum tubes, transistors, etc. Then with the advent of Small Scale Integration, Medium Scale Integration, Large Scale Integration, and Very Large Scale Integration technology, circuits with very small dimension became more reliable and faster. This development in hardware technology gave new dimension in designing processors and its peripherals.
2. **Software:** The evolution of programming languages started with the machine language, then assembly language, high-level languages and now advanced languages like object-oriented languages, distributed languages and prototype-based or scripting languages, etc. have been developed. Also the developments in operating systems significantly changed the dimension in execution of the real-time applications.

An enterprise-friendly book recommendation system for very sparse data

Publisher: IEEE Cite This PDF

Tejash Desai ; Sahil Ganchi ; Pranav Muridhar ; Sanjalp Gupta ; M. Vijayalakshmi ; G. P. Bhole All Authors

Abstract:
Recommendation systems designed using biclustering handle the existing duality between users and items, which is not observed in other popular approaches. However, biclustering is generally limited by sparsity in the data and usually requires huge computational powers. In this paper, we propose a ready-for-enterprise book recommendation system using the biclustering algorithm. Our proposed algorithm consists of a hybrid approach containing an initial cluster phase which is taken as input for a biclustering phase. We show that our approach not only proves to be scalable dealing with large amounts of sparsity but also produces results with error values comparable to other state-of-the-art approaches, thereby making it enterprise-friendly.

Published in: 2016 International Conference on Computing, Analytics and Security Trends (CAST)

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Publisher: IEEE

Conference Location: Pune, India

I. Introduction

With the tremendous growth of social media and e-commerce, recommendation systems have garnered a lot of commercial value in recent times. Showing a user items that are pertaining to his/her likings increases the user-experience, thereby increasing number of transactions he/she undertakes on the platform. According to a 2013 interview by Todd Yellin, Vice President of Prod... at entertainment giant Netflix, "About 75 to 80

Comparative analysis of image quality measures

Ashish Devnani ; C. D. Rawat All Authors

Abstract:
This paper consists of a comparative analysis of full reference image quality measures. The quality evaluation model of Peak signal to noise ratio (PSNR), Structural Similarity Index (SSIM) as well as Visual Information Fidelity (VIF) has been discussed. This paper emphasizes on the quality evaluation of images after their recovery from their noisy counterparts. The image quality assessment algorithms discussed are used to develop further image processing algorithms so that quality of images recovered is superior. The paper stresses on the image quality metrics from the point of view of correlation with subjective measure of image quality for successful implementation in research and development in the image processing industry.

Published in: 2016 International Conference on Global Trends in Signal Processing, Information Computing and Communication (ICGTSPICC)

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INSPEC Accession Number: 16980342

DOI: 10.1109/ICGTSPICC.2016.7955327

Publisher: IEEE

Conference Location: Jalgaon, India

I. Introduction

We are currently in the Internet age where images are of a great importance to express ideas, concepts etc. With growing penetration of images in the Internet it has become increasingly important to monitor the quality of images which are being displayed for a certain purpose. Image quality assessment is one of the challenging fields of digital image processing systems. Image quality is defined as a characteristic of an image that measures the perceived image degradation as compared to a reference image. It can be

A new method of reconfigurable ADC using calibrated programmable slopes

Publisher: IEEE

Cite This PDF

Jayamala Adeul ; P. P. Vaidya ; J. M. Nair All Authors

Abstract:
The paper explores a new technique for improving and optimizing the resolution and conversion time of reconfigurable Analog to Digital Converter (ADC) using programmable slopes. The most commonly used and simple way of analog to digital conversion using single slope technique requires two to the power of N number of bits (where N is ADC resolution) clock cycles to convert full scale voltage. As the number of bits increases, conversion time also increases. This limitation of high conversion time for high resolution is addressed by a reconfigurable programmable slope ADC. The reconfigurability in this ADC is achieved by changing the slope of ramp during conversion which is utilized to optimize its resolution and conversion time. The programmable slopes of ramp are obtained using programmed current sources which are made using low cost DACs and are calibrated to the required accuracy using a simple technique described in the paper. A two slope 12-bit ADC was designed and simulated using MultiSim 13.0, test results of which are presented in the paper. Using this method the conversion time is scaled down even at reduced clock frequency. Because of reduced clock frequency, the problems of noise pickup and high power dissipation associated with high clock frequency are also avoided. It is also possible to use different clock frequencies during each slope for further optimization of resolution and conversion time.

Published in: 2016 International Conference on Communication and Electronics Systems (ICCES)

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INSPEC Accession Number: 16776305

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ISBN Information:

Publisher: IEEE

Conference Location: Coimbatore, India

I. Introduction

Reconfigurable Analog to Digital converters (ADC) are the ADCs which can be configured to obtain optimum performance with respect to important performance parameters such as resolution, conversion time and power dissipation etc. There is a requirement for development of such ADCs in the field of multi-standard communication [1], wireless networking [2], and signal processing for sensors [3]. Different types of ADCs have been reconfigured [4]–[8] using various techniques. In this paper we present the designing and simulation of reconfigurable programmable slope ADC circuit which has been tested using MultiSim 13.0 developed by National Instruments. The integrating

Implementation of K-means clustering for evaluating SaaS on the cloud computing environment

Publisher: IEEE Cite This PDF

Dhananjay Joshi ; Seema Purohit ; Subash Chandra Bala All Authors

Abstract:
The current trend in the technology have been drastically changed. The usage of latest technology, cloud computing become a central attraction in everywhere for sharing resources. Software as a Service (SaaS) is the most important part of cloud computing, it can be used for providing various business solutions. In the real world, many organizations had successfully implemented this concept. Henceforth demand for Software as a Service (SaaS) has been tremendously increased by end users as well as by a service provider, but still, it is a big challenging task for cloud service providers to evaluate their services provided to the end user. It is also difficult for end users to find out the potential software services in the cloud computing environment. In this paper, the solution for evaluating SaaS quality attributes is provided by using K-means clustering algorithm. This paper initially describes the motivation for evaluating SaaS on the cloud-computing environment with the problem description. Secondly, it's describing the various issues and challenges for evaluating software services on the cloud computing. Thirdly, it explains about the proposed work in evaluating Software as a Service. Finally, the solution to the identified problem is implemented and analyzed the results.

Published in: 2016 International Conference on ICT in Business Industry & Government (ICTBIG)

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Publisher: IEEE

Conference Location: Indore, India

I. Introduction

Cloud Computing, as well known as on-demand computing, is a form of Internet-based computing, where resources like data and information are provided as shared resources with any devices on demand [1]. (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and [redacted] effort or service provider interaction. It

NFC and NFC payments: A review

Publisher: IEEE

Cite This

PDF

Nahar Sunny Suresh Shobha | Kajaneka Sunil Pravin Aruna | Manjrekar Devesh Parag Bhagyashree | Kotian Siddharth Jagdish Sadhe All Authors

Abstract:
Near Field Communication (NFC) as a form of technology has seen many improvements in recent years due to the increasing availability of NFC enabled devices. It is used for short range communication and based on the existing standards of Radio frequency identification (RFID) infrastructure. Simple and safe bidirectional communication between NFC enabled devices is made possible by this technology. In this review paper, NFC technology is put forward with respect to its implementation, operating modes, its application in the form of tags as well as payments and its standards and protocols. NFC application in the field of payments is explained with the help of NFC device architecture. Basic NFC forum architecture and threats with respect to this technology are also discussed.

Published in: 2016 International Conference on ICT in Business Industry & Government (ICTBIG)

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Publisher: IEEE

Conference Location: Indore, India

I. Introduction

Wireless Technology is fast replacing the wired technology. A gain of 128 percent in the shipments of phones equipped with wireless technology rose from 120 million to 275 million in 2013. According to Information Handling Service (IHS), from 2013 through the end of 2016 shipments could grow 30 [illegible] that a single device can be used to access

Satellite image resolution enhancement using DTCWT and DTCWT based fusion

Publisher: IEEE

Cite This

PDF

Vineet Vilas Naik ; Saylee Gharge All Authors

Abstract:
To increase the resolution of any image, Interpolation techniques are adopted. The high frequency components in the low resolution (LR) image are lost when the images are interpolated. To overcome this problem a new satellite image resolution enhancement algorithm based on Dual Tree Complex Wavelet transform (DTCWT) and its rotated version have been proposed. DTCWT and Rotated DTCWT give 32 subbands of an image, out of which 24 are high frequency (HF) subbands which give 12 different angular information and 8 are low frequency (LF) subbands. The HF subbands are interpolated by Lanczos Interpolation to preserve the high frequency contents of the image. Non Local Means (NLM) filtering is used to eliminate the artifacts which are generated by DTCWT and rotated DTCWT. To obtain the two enhanced high resolution images inverse transforms are performed over respective subbands. The final two high resolution (HR) images are fused together with DTCWT based fusion to give resolution enhanced HR image. To evaluate the performance of the proposed algorithm three performance parameters namely PSNR, SSIM and Q-Index are evaluated for a database of 60 grayscale images of resolution 256×256. The subjective and objective results are compared with the existing techniques to prove the superiority of the proposed algorithm.

Published In: 2016 International Conference on Advances in Computing, Communications and Informatics (ICACCI)

Date of Conference: 21-24 Sept. 2016

Date Added to IEEE *Xplore*: 03 November 2016

INSPEC Accession Number: 16429766

DOI: 10.1109/ICACCI.2016.7732338

Publisher: IEEE

Conference Location: Jaipur, India

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I. Introduction

Satellite images are widely used these days for various applications such as astronomy, military surveillance geoscience studies etc. The satellite images contain very much detailed information about the characteristics of the captured area. In this the resolution