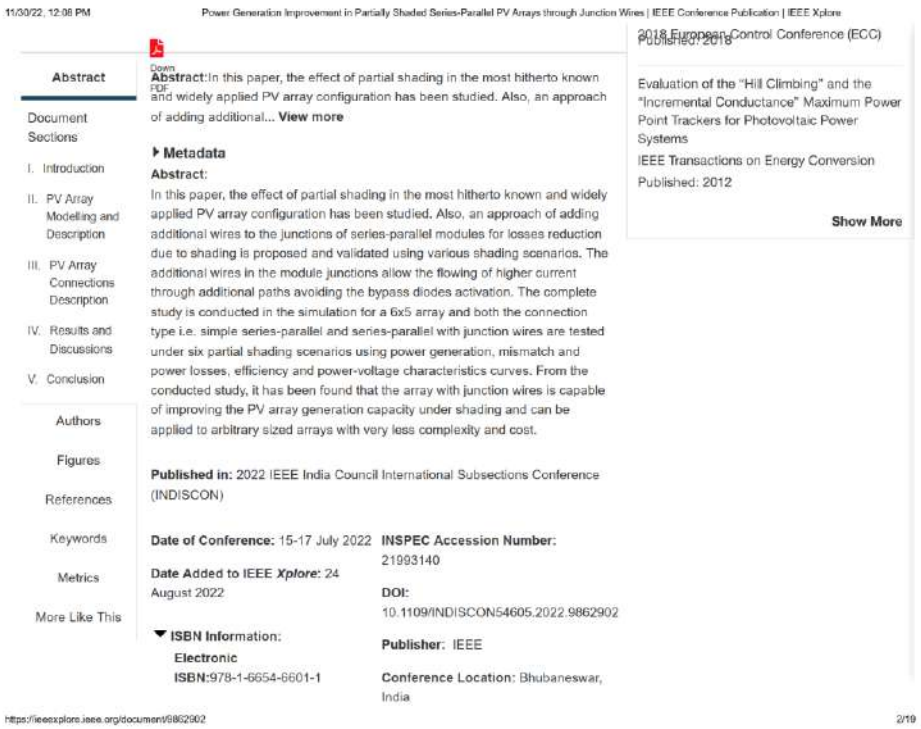
3.4.4.1: Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year wise during last five years

Index Page

Principal
Chaitanya Bharathi Institute of Technology
(Autonomous)
Gandipet, Hyderabad-500 075.

Power Generation Improvement in Partially Shaded Series-Parallel PV Arrays through Junction Wire



Estimation of instantaneous shear modulus in neat resin and multi walled nanotube reinforced carbon epoxy composites by finite element analysis

Conference proceedings | © 2022

Recent Advances in Computational and Experimental Mechanics, Vol—I

Select Proceedings of ICRACEM 2020

Editors: D. Maity, P. K. Patra, M.S. Afzal, R. Ghoshal, C. S. Mistry, P. Jana, D. K. Maiti

Presents theoretical, computational, and experimental aspects of fluid and solid mechanics

Covers topics that include fluid mechanics, computational fluid dynamics, fluid–structure interaction, etc

Discusses various attributes of fluid mechanics in disciplines, such as aerospace, civil, mechanical, ocean engineering

Part of the book series: Lecture Notes in Mechanical Engineering (LNME)

Conference series link(s): ICRACEM: Online International Conference on Recent Advances in Computational and Experimental Mechanics

Kharagpur and a B.Tech. (H) degree in Civil Engineering also from IIT Kharagpur

Back to top ↑

Bibliographic Information

Book Title	Book Subtitle	Editors
Recent Advances in Computational and Experimental Mechanics, Vol—I	Select Proceedings of ICRACEM 2020	D. Maity, P. K. Patra, M.S. Afzal, R. Ghoshal, C. S. Mistry, P. Jana, D. K. Maiti
Series Title	**DOI**	**Publisher**
Lecture Notes in Mechanical Engineering	https://doi.org/10.1007/978-981-16-6738-1	Springer Singapore
eBook Packages	**Copyright Information**	**Hardcover ISBN**
Engineering, Engineering (R0)	The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2022	978-981-16-6737-4
eBook ISBN	**Series ISSN**	**Series E-ISSN**
978-981-16-6738-1	2195-4356	2195-4364
Edition Number	**Number of Pages**	**Number of Illustrations**
1	XIII, 669	124 b/w illustrations, 275 illustrations in colour

Estimation of instantaneous shear modulus in neat resin and multi walled nanotube reinforced carbon epoxy composites by finite element analysis

Ramalakshmi Pullela [1a] and Rushyanth Tirunagari [1b]

[a] Assistant Professor , [b] Graduate Student
MED, Chaitanya Bharathi Institute of Technology (Autonomous), Hyderabad, Telangana State, India

ABSTRACT

In literature review, interlaminar shear strength in neat resin and MWNT reinforced composite is estimated by ASTM 1425 and finite element analysis by solid 46 available in ANSYS element library. In the present work, SHELL 281 is selected from ANSYS library to predict interlaminar shear strength and instantaneous shear modulus . SHELL element showed very good convergence over solid element.

Keywords: carbon; epoxy; multi walled nanotube; shear modulus; shear strength

1. INTRODUCTION & OBJECTIVE

Aircraft structures, automotives and marine structures find application of carbon epoxy composite due to high specific strength, low specific weight and high specific gravity. By adding MWNTs, it is observed that the brittle nature of epoxy is reduced and it increases the interlaminar shear strength of the composite. Yi Lei Wang [1], improved the interlaminar shear strength (ILSS) of carbon epoxy composite by growing the networks of multi walled carbon nanotubes by short beam shear test and its ILSS was observed to be 47.59 ± 2.26 MPa. ChandanKumar et al [2], examined the combined effect of loading rate and percentage by weight of MWNT on ILSS and flexural strength of CFRP by ASTM 2344.

Ramalakshmi et al [3] estimated ILSS by ASTM C 1425 and finite element analysis by ANSYS software. The deviation from both the methods was noticed to be 9.21 % by employing SOLID 46 element [4]. In the present work, SHELL 281 is used to predict the distribution of ILSS and instantaneous shear modulus. To accommodate the inclusion of the notch in the specimen while generating the finite element (FE) model, section properties along the thickness direction are varied.

2. RESULTS & HIGHLIGHTS OF IMPORTANT POINTS

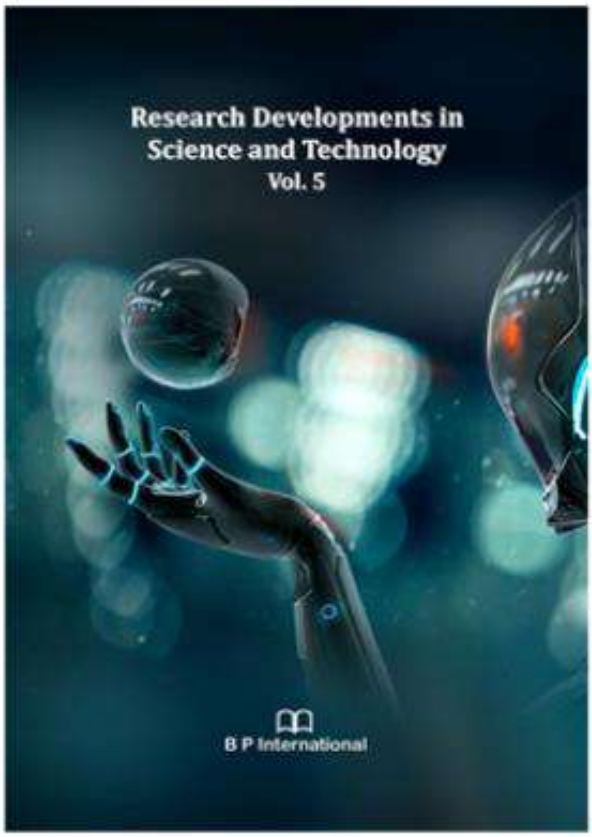
Table 1: ILSS in carbon epoxy composite at an average load of 2824 N

Sl.No	P_{max} in N	ILSS in MPa			Co-ordinates		Deviation	
		ASTM 1425	FEA solution		Case 1	Case 2	Case 1	Case2
			Case 1	Case 2				
Avg	2824	31.99	31.95	31.97	(18.87,0,0)	(10.53,15,0)	0.11	0.08

Table 2: ILSS in MWNT reinforced composite at an average load of 6218 N

Sl.No	P_{max} in N	ILSS in MPa			Co-ordinates		Deviation	
		ASTM 1425	FEA solution		Case 1	Case 2	Case 1	Case2
			Case 1	Case 2				
Avg	6218	60.03	59.81	59.98	(18.48,0,0)	(10.42,15,0)	0.37	0.09
Reference [2]		47.59 ± 2.26 MPa						

Further author information: Email: pramalakshmi_mech@cbit.ac.in



(https://www.bookpi.org/bookstore/wp-content/uploads/2022/05/RDST-V5.jpg)

Research Developments in Science and Technology Vol. 5

Dr. SungCheal Moon

Department of Polymer Engineering, Industrial Technology Support Division, Korea Institute of Materials Science (KIMS), Republic of Korea.

BOOK DETAILS (HTTPS://STM.BOOKPI.ORG/RDST-V5/ISSUE/VIEW/655)

BUY PRODUCT

SKU: RDST-V5
Category: Science And Technology (Https://Www.Bookpi.Org/Bookstore/Product-Category/Science-And-Technology/)
Tag: Science And Technology (Https://Www.Bookpi.Org/Bookstore/Product-Tag/Science-And-Technology/)

Book Details

Editor	*Dr. SungCheal Moon*
Pages	*156*
Publisher	*B P International*
Language	*English*
ISBN-13 (15)	*978-93-5547-670-8 (Print)* *978-93-5547-671-5 (eBook)*
Published	*May 17, 2022*

About The Author / Editor

Dr. SungCheal Moon

Department of Polymer Engineering, Industrial Technology Support Division, Korea Institute of Materials Science (KIMS), Republic of Korea.

Description Reviews (0)

Study on Corrosion Resistant Materials for Centrifugal Pump Impeller

R. Navaneetha ; Ch. Indira Priyadarsini ; T. Ratna Reddy

Research Developments in Science and Technology Vol. 5, 17 May 2022, Page 47-57
https://doi.org/10.9734/bpi/rdst/v5/6135F
Published: 2022-05-17

View Article | Cite | Share

Abstract

An impeller is a revolving component that increases or lowers fluid flow and pressure and has a wide range of applications in the aircraft, automobile, medical, and power plant industries. When exposed to damaging mediums such as waste water, seawater, sewage, chlorine, bromine, and a variety of chemicals in real-time applications, bronze and hardened steel impellers swiftly degrade. They are reliant on cavitations and electrolysis (galvanic erosion), which rapidly degrade the impeller. Corrosion is a key issue with impellers, which drives up pump operating and maintenance costs, forcing industry to look for alternate materials. The major objectives of this work is to choose the best material for the impeller that will resist corrosion. Materials such as Caprolone (Nylon) and ABS (Acrylonitrile Butadiene Styrene) have been consider for the study than conventional materials like stainless steel and bronze. The simulation results have shown that the ABS material performed well in terms of corrosion resistance as it has chemical, thermal stability along with toughness and strength.

Keywords: Centrifugal; corrosion; pump; impeller

(https://www.bookpi.org/bookstore/wp-content/uploads/2022/06/TIER-V4.jpg)

Technological Innovation in Engineering Research Vol. 4

Dr. Rajkumar Venkatesh Raikar
Department of Civil Engineering, KLE Dr. M. S. Sheshgiri College of Engineering and Technology, Karnataka, India.

BOOK DETAILS (HTTPS://STM.BOOKPI.ORG/TIER-V4/ISSUE/VIEW/694)

BUY PRODUCT

SKU: TIER-V4
Category: Engineering (Https://Www.Bookpi.Org/Bookstore/Product-Category/Engineering/)
Tag: Engineering (Https://Www.Bookpi.Org/Bookstore/Product-Tag/Engineering/)

Book Details

Editor	*Dr. Rajkumar Venkatesh Raikar*
Pages	*174*
Publisher	*B P International*
Language	*English*
ISBN-13 (15)	*978-93-5547-480-3 (Print)* *978-93-5547-492-6 (eBook)*
Published	*June 21, 2022*

About The Author / Editor

Dr. Rajkumar Venkatesh Raikar

Department of Civil Engineering, KLE Dr. M. S. Sheshgiri College of Engineering and Technology, Karnataka, India.

Description Reviews (0)

Performance of a Semi Adiabatic Diesel Engine Fuelled with Jatropha Bio-diesel

N. Janardhan ; M. V. S. Murali Krishna

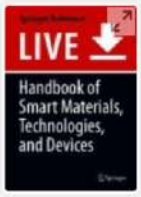
Technological Innovation in Engineering Research Vol. 4, 21 June 2022, Page 134-149
https://doi.org/10.9734/bpi/tier/v4/2463A
Published: 2022-06-21

View Article | Cite | Share

Abstract

Background of the Problem: In the scenario of fast impoverish of conventional fuels, ever hike of pollution levels with conventional fuels, increase of financial bundle on emerging countries due to import of crude petroleum with foreign currency exchange rate, the investigation for alternative fuels has become relevant and important. Oils extracted from the seeds of the plant, and alcohols, manufactured from biomass are important replacements for conventional diesel, as they are reclaimable. Oils from the seeds of the plants have energy fuels per unit mass and cetane number (a measure of ignition quality in diesel engine) are on par with diesel fuel. But they have high viscidity and low fugitive. On the other hand, biofuels have high transient. But they have low cetane number and low energy content per unit mass. Hence oils from the seeds of the plants are chemically converted into biodiesel to reduce viscidity and raised ignition quality. The problems of biodiesel are solved with engine, semi adiabatic diesel engine, which mitigate the heat flow to the coolant.

Aim: Trials were performed on a low heat rejection (LHR) diesel engine or semi adiabatic diesel engine employing an air gap insulated piston with 3-mm air gap, with stainless steel crown and air gap insulated liner with stainless steel insert with various functions of conditions of jatropha bio-diesel with varied injection timing and injector opening pressure.



Living reference work | © 2020

Handbook of Smart Materials, Technologies, and Devices

Applications of Industry 4.0

Editors: Chaudhery Mustansar Hussain, Paolo Di Sia

Elucidates innovative thematic concepts of Industry 4.0 and perspectives

Identifies strong roadmaps of Industry 4.0 towards sustainable development

Establishes routes to real time utilization of Industry 4.0 at commercial scale manufacturing

Sections

Bibliographic Information

Book Title	Book Subtitle	Editors
Handbook of Smart Materials, Technologies, and Devices	Applications of Industry 4.0	Chaudhery Mustansar Hussain, Paolo Di Sia
DOI	**Publisher**	**eBook Packages**
https://doi.org/10.1007/978-3-030-58675-1	Springer Cham	Springer Reference Engineering, Reference Module Computer Science and Engineering

Topics

Industrial and Production Engineering, Materials for Devices, Industrial Automation

Back to top ↑

Springer Link

Search

LIVE

Handbook of Smart Materials, Technologies, and Devices pp 1–13 | Cite as

IoT-Based Medication Reminder Devices: Design and Implementation

Authors | Authors and affiliations

Living reference work entry

First Online: 11 January 2023

Abstract

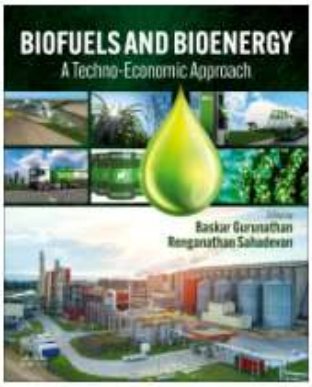
IoT (Internet of Things) refers to a system of Internet-connected devices which are capable of sending and receiving the data without human intervention. This technology enabled the remote monitoring in healthcare sector which leads to keep the patients safe and healthy, and ensuring to deliver superlative care. Some people apparently should be taken care by the caretakers and other family members. This is not provided by everyone in today's life. So, they may forget to take medicines at the right time and may also forget what medicine has to be taken. This project aims to develop a device which alerts the patients to take medicine at right

Techno-economic and environmental impact analysis of biofuels produced from microalgal biomass

ELSEVIER (https://www.elsevier.com) (https://www.elsevier.com/search-results) (https://w

Home (https://www.elsevier.com)
> Physical Sciences and Engineering (https://www.elsevier.com/physical-sciences-and-engineering)
> Energy (https://www.elsevier.com/physical-sciences-and-engineering/energy)
> Books (https://www.elsevier.com/physical-sciences-and-engineering/energy/books) > Biofuels and Bioenergy

Black Friday Event: save up to 30% on print and eBooks with free shipping. No promo code needed. More details > (https://www.elsevier.com/books-and-journals/special-offers)



View on ScienceDirect (https://www.sciencedirect.com/science/book/9780323900409)

Biofuels and Bioenergy

A Techno-Economic Approach

1st Edition - June 14, 2022

Write a review

Editors: Baskar Gurunathan, Renganathan Sahadevan

eBook ISBN: 9780323885560

Paperback ISBN: 9780323900409

Purchase options

Select country/region

India

Search by keyword, title, subject area

Bundle (eBook, Paperback)
50% Off

~~$370.00~~
$185.00

Biofuels and Bioenergy
A Techno-Economic Approach
2022, Pages 687-712

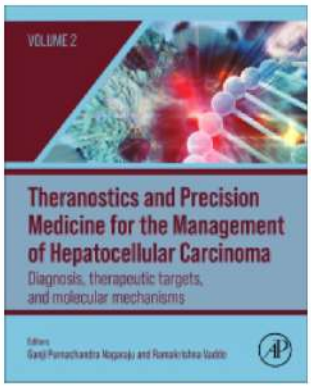
Chapter 29 - Techno-economic and environmental impact analysis of biofuels produced from microalgal biomass

C. Nagendranatha Reddy [1], V. Vineetha [1], A. Priyanka [1], A. Shalini [1], Bishwambhar Mishra [1], V. Rajasri [1], V. Swapna [2]

https://doi.org/10.1016/B978-0-323-90940-9.00006-8

Abstract

An initiative has been taken globally to develop different biofuels as alternative energy sources. Recent findings and advanced developments in algal biomass for



Theranostics and Precision Medicine for the Management of Hepatocellular Carcinoma, Volume 2

Diagnosis, Therapeutic Targets, and Molecular Mechanisms

1st Edition - April 1, 2022

Editors: Ganji Nagaraju, Ramakrishna Vadde

Hardcover ISBN: 9780323988070

eBook ISBN: 9780323993654

CHAPTER

2

Hepatocellular carcinoma—An updated review

Varimadugu Aruna, A. Sneha and D. Sai Harshitha

Chaitanya Bharathi Institute of Technology, Hyderabad, India

Abstract

Cancer is referred to as the abnormal proliferation of cells. This occurs due to combined genetic and nongenetic alterations that are usually induced by environmental factors, which trigger inappropriate expression of specific genes leading to neoplastic transformations. There are many types of cancer among which the sixth most frequently detected is the liver cancer. The occurrence of hepatocellular carcinoma (HCC) has been steadily rising year by year all over the world. This review deals with various reasons for HCC stating from lifestyle to mutations. The literature suggested that the cause for the occurrence of this cancer is due to aflatoxin, alcohol, and hepatitis virus. Though the detailed mechanism of progression of HCC is not exactly clear, some experimental evidence that provides partial information about the mechanism of HCC are discussed here. In this chapter various methods that are available for the diagnosis of HCC and its further treatment are discussed. With technological advancements in the recent years, many new methods are designed for the detection of HCC as well as to treat it. This can further increase the life span of a person to some more extent.

Keywords: Aflatoxin; cancer diagnosis; cancer treatment; chemotherapy; cholangiocarcinoma; hepatectomy; hepatocellular carcinoma; hepatitis; liver cancer; liver transplantation; oncogenic drivers; radiation therapy; surgical resection; tumor suppressor

Abbreviations

AFP	Alpha-fetoprotein
CT	Computed tomography
GPI	Glycosylphosphatidylinositol
HBV	Hepatitis B virus
HCC	Hepatocellular carcinoma
HCV	Hepatitis C virus
HSPGs	Heparan sulfate proteoglycans
MRI	Magnetic resonance Imaging
NAFLD	Nonalcoholic fatty liver disease
ROS	Reactive oxygen species

Gunji Purnachandra Nagaraju, Sujatha Peela (eds.)
Theranostics and Precision Medicine for the Management of Hepatocellular Carcinoma, Volume 1
DOI: https://doi.org/10.1016/B978-0-323-98806-3.00022-2

Role of Enzymes in Biofuel Production: Recent Developments and Challenges

Book | © 2022

Bio-Clean Energy Technologies: Volume 1

Editors: Pankaj Chowdhary, Namita Khanna, Soumya Pandit, Rajesh Kumar

Discusses wide-ranging energy intensive molecules generated by microbes

Comprehensively discuss the new molecular tools and technologies available to engineer microbes

Explores strategies for implementation of the microbial based products on commercial scales

Part of the book series: Clean Energy Production Technologies (CEPT)

Sections

Bio-Clean Energy Technologies: Volume 1	Pankaj Chowdhary, Namita Khanna, Soumya Pandit, Rajesh Kumar	Clean Energy Production Technologies
DOI https://doi.org/10.1007/978-981-16-8090-8	**Publisher** Springer Singapore	**eBook Packages** Earth and Environmental Science, Earth and Environmental Science (R0)
Copyright Information The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2022	**Hardcover ISBN** 978-981-16-8089-2	**eBook ISBN** 978-981-16-8090-8
Series ISSN 2662-6861	**Series E-ISSN** 2662-687X	**Edition Number** 1
Number of Pages XII, 418	**Number of Illustrations** 1 b/w illustrations	**Topics** Waste Management/Waste Technology, Environmental Engineering/Biotechnology, Environmental Chemistry

Back to top ↑

Chapter 4
Role of Enzymes in Biofuel Production: Recent Developments and Challenges

Arvind Bangaru, Kamasani Aarya Sree, Chandana Kruthiventi, Meenakshi Banala, Vadapalli Shreya, Y. Vineetha, A. Shalini, Bishwambhar Mishra, Rajasri Yadavalli, K. Chandrasekhar, and C. Nagendranatha Reddy

Abstract The increasing interest in the production of renewable and clean fuel has led to various cost-effective and efficient strategies with minimal impact on the environment. One such strategy of producing biofuels using enzyme-mediated catalysis has gained much attention globally. This chapter aims at improving the overall yield in a less energy-intensive and more environmentally friendly way compared to its production by conventional processes. The production of various clean fuels, various enzymes used so far for biohydrogen and biodiesel production, the significance of immobilization and improving the biofuel efficiency by identifying novel enzymes through metagenomic approach and enhancing the enzyme/metabolite production, and various obstacles faced and future perspectives have been elaborated in this chapter.

Keywords Enzymes · Biofuel · Novel enzymes · Biohydrogen · Biodiesel · Immobilization

Arvind Bangaru, Kamasani Aarya Sree and Chandana Kruthiventi contributed equally with all other contributors.

A. Bangaru · K. A. Sree · C. Kruthiventi · M. Banala · V. Shreya · Y. Vineetha · A. Shalini · B. Mishra · R. Yadavalli · C. N. Reddy (✉)
Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana, India
e-mail: nagendranath_biotech@cbit.ac.in

K. Chandrasekhar
Green Processing, Bioremediation and Alternative Energies Research Group, Faculty of Environment and Labour Safety, Ton Duc Thang University, Ho Chi Minh City, Vietnam

P. Chowdhary et al. (eds.), *Bio-Clean Energy Technologies: Volume 1*, Clean Energy Production Technologies, https://doi.org/10.1007/978-981-16-8090-8_4

Biofuels and Bioenergy

A Techno-Economic Approach

Book • 2022

Edited by:

Baskar Gurunathan and Ranganathan Sahadevan

Search in this book

Table of contents

Download PDF

About the book

Description

Biofuels and Bioenergy: A Techno-Economic Approach provides an in-depth analysis of the economic aspects of biofuels production from renewable feedstock. Taking a biorefinery approach, the book analyzes a wide range of feedstocks, processes and products, including common biofuels such as bioethanol, biobutanol, biooil and biodiesel, feedstocks

Show more

Key Features

Focuses on an in-depth, techno-economic analysis of biofuel and bioenergy products, including all important feedstocks, processes and products, all of which are supported by industry case studies

Includes environmental impacts and lifecycle assessments of biofuels production alongside techno-economic

Show more

Details

ISBN

978-0-323-90040-9

Language

English

Published

2022

Imprint

Elsevier

DOI

https://doi.org/10.1016/C2020-0-02574-0

CHAPTER 29

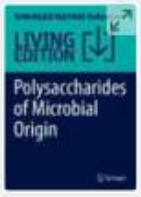
Techno-economic and environmental impact analysis of biofuels produced from microalgal biomass

C. Nagendranatha Reddy[1], Y. Vineetha[1], A. Priyanka[1], A. Shalini[1], Bishwambhar Mishra[1], Y. Rajasri[1] and V. Swapna[2]
[1]Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana, India
[2]Department of Chemical Engineering, Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana, India

29.1 Introduction

Biofuel can technically be defined as any type of fuel which is derived from biomass (any plant material, animal-derived wastes or algal source). As per the literature, it is clear that algae contribute to a higher ratio of biomass when compared to other sources as the productivity is higher (Venkata Mohan et al., 2016; Nagendranatha Reddy et al., 2019b). Hence, the chapter is completely focused on the micro or macroalgal biomass for biofuel production. Macroalgae can be used to produce biofuels through different processing techniques which include fermentation processes or different thermal processes. Microalgae's biomass along with greenhouse gases (GHG) can be used as a potential substrate for biodiesel production thereby reducing the utilization of conventional fuels and environmental pollution and as well (Montingelli et al., 2015). Microalgae has diverse properties which make that feasible to use them as an energy source directly as biomass for various reactions or they are known to be used for high oil content, and both heterotrophic and autotrophic algal forms could be used in biofuel production. Inorganic carbon (CO_2) will be used as a carbon source if they are autotrophic, and sugars from biomass will be used as a carbon source if they are heterotrophic in origin (Davis et al., 2011). In the process of producing biofuels from autotrophic algal forms, they covert the solar energy into biomass utilizing CO_2 and it is highly feasible as they can be grown in the open ponds and photobioreactors (PBRs). Because of the above-mentioned advantages, most of the commercial biofuel plants are inclined toward setting up autotrophic biofuel fields compared to that of the heterotrophic ones (DOE, 2010; Rohit et al., 2016). And, also based on the substrates used, the biofuels can be divided into three different generations. Out of which, the first-generation biofuels are made from plant-based materials viz., sugarcane, corn, etc. The second-generation biofuels used lignocellulosic biomass as feedstock, whereas the

Biofuels and Bioenergy
DOI: https://doi.org/10.1016/B978-0-323-90040-9.00006-0



Living reference work | © 2020

Polysaccharides of Microbial Origin

Biomedical Applications

Editors: Joaquim Miguel Oliveira, Hajer Radhouani, Rui L. Reis

Presents the extraction, isolation, and production procedures of these microbial polysaccharides;

Describes the biological activities, structural and physicochemical properties of these polysaccharides;

Surveys advanced processing methodologies underlying tissue-engineered scaffolding and drug delivery systems

Sections

of Minho, Braga & Guimarães, Portugal. He is also the Director of the 3B's Research Group, part of the I3Bs – Research Institute on Biomaterials, Biodegradables and Biomimetics of the UMinho in Portugal (www.i3bs.uminho.pt), and the Director of the PT Government Associate Laboratory ICVS/3B´s.

Back to top ↑

Bibliographic Information

Book Title	Book Subtitle	Editors
Polysaccharides of Microbial Origin	Biomedical Applications	Joaquim Miguel Oliveira, Hajer Radhouani, Rui L. Reis
DOI	**Publisher**	**eBook Packages**
https://doi.org/10.1007/978-3-030-35734-4	Springer Cham	Springer Reference Biomedicine & Life Sciences, Reference Module Biomedical and Life Sciences
Number of Pages	**Number of Illustrations**	**Topics**
X, 990	10 b/w illustrations	Medical Microbiology, Biomaterials, Biomedical Engineering and Bioengineering, Biotechnology

Back to top ↑

An Insight into Pullulan and Its Potential Applications

C. Nagendranatha Reddy, Bishwambhar Mishra, Sanjeeb Kumar Mandal, Dinesh Chand Agrawal, and Chandana Kruthiventi

Contents

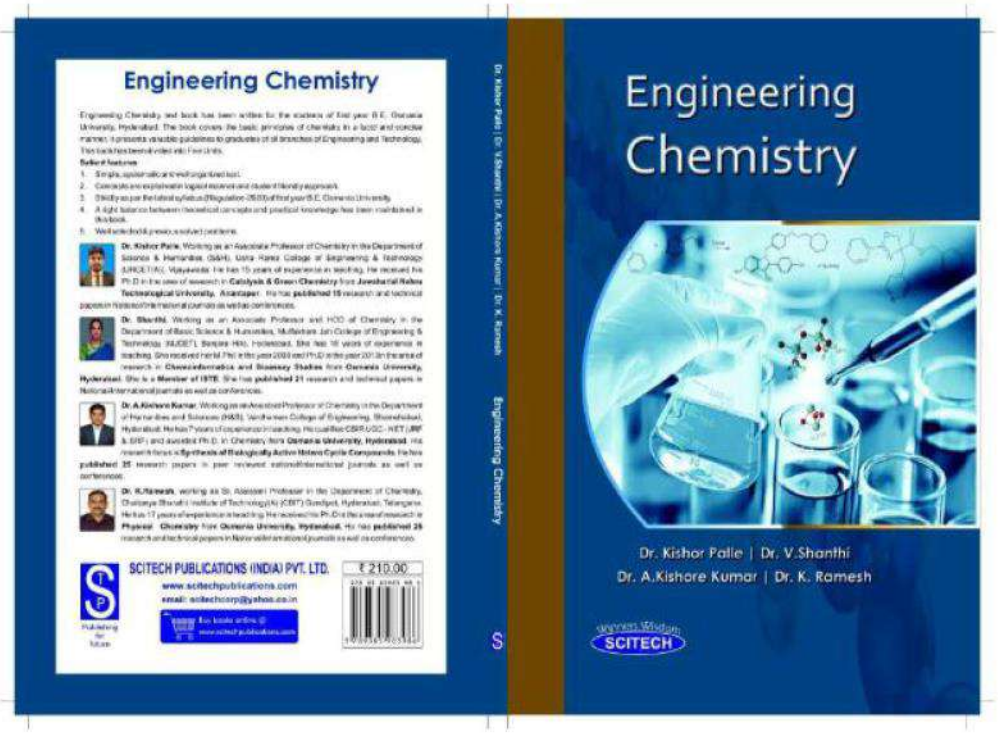
C. N. Reddy · B. Mishra (✉) · C. Kruthiventi
Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana, India
e-mail: nagendranath_biotech@cbit.ac.in

S. K. Mandal
Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana, India

D. C. Agrawal
Department of Biotechnology, Faculty of Engineering & Technology, Rama University, Kanpur, Uttar Pradesh, India

J. Oliveira et al. (eds.), *Polysaccharides of Microbial Origin*,
https://doi.org/10.1007/978-3-030-35734-4_15-1

Engineering Chemistry



Conference proceedings | © 2022

Smart Technologies for Energy, Environment and Sustainable Development, Vol 1

Select Proceedings of ICSTEESD 2020

Editors: Mohan Lal Kolhe, S. B. Jaju, P. M. Diagavane

Covers the topics of energy, environment, and sustainable development

Presents select proceedings of ICSTEESD 2021

Discusses recent technologies in the domain of energy and environmental systems engineering

Part of the book series: Springer Proceedings in Energy (SPE)

Conference series link(s): ICSTEESD: International Conference on Smart Technologies for Energy, Environment, and Sustainable Development

Conference proceedings info: ICSTEESD 2020.

conferences. She is associated to many prestigious professional societies like Institution of Engineers (India), ISTE New Delhi and IEEE.

Back to top ↑

Bibliographic Information

Book Title	Book Subtitle	Editors
Smart Technologies for Energy, Environment and Sustainable Development, Vol 1	Select Proceedings of ICSTEESD 2020	Mohan Lal Kolhe, S. B. Jaju, P. M. Diagavane
Series Title	**DOI**	**Publisher**
Springer Proceedings in Energy	https://doi.org/10.1007/978-981-16-6875-3	Springer Singapore
eBook Packages	**Copyright Information**	**Hardcover ISBN**
Energy, Energy (R0)	The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2022	978-981-16-6874-6
eBook ISBN	**Series ISSN**	**Series E-ISSN**
978-981-16-6875-3	2352-2534	2352-2542
Edition Number	**Number of Pages**	**Number of Illustrations**
1		

Smart Technologies for Energy, Environment and Sustainable Development, Vol 1 pp 521–529

A Brief Review of Cathode Materials for Li-ion Batteries

D. Saritha

Conference paper | First Online: 25 February 2022

Part of the Springer Proceedings in Energy book series (SPE)

Abstract

A crucial quantity of battery research is happening to realize the idea of electric vehicle applications. Incredible advancement has accomplished in the improvement of Li-ion batteries in modern eras. Nanostructured materials are attention presently for Li-ion batteries owing to their huge surface area, porosity, and little diffusion length.

For MCA Distance Education Students, Osmania university

Instructional Material

Post Graduate Diploma in Computer Applications

SEMESTER – II

SOFTWARE ENGINEERING AND OBJECT ORIENTED ANALYSIS AND DESIGN

PAPER - III

COURSE WRITER

MR. M. KALIDAS

Assistant Professor
Department of MCA
Chaitanya Bharathi Institute of Technology (Autonomous),
Gandipet, Hyderabad.

Director
Prof. Chintha Ganesh

Prof. G. Ram Reddy Centre for Distance Education
Osmania University, Hyderabad – 500 007
2019-2020

MACHINE LEARNING USING PYTHON

Dr. Premnarayan Arya, Chandra Mani Sharma and Rupesh Kr. Mishra

ISBN – 978-93-95468-10-7

Published by:

AGPH Books (Academic Guru Publishing House)

Bhopal, M.P. India

Contact: +91-7089366889

Health Monitoring Using at Mega Microcontroller and IoT

Health Monitoring Using at Mega Microcontroller and IoT

Dr. Raghavendar Raju L

Ph.D.(CSE), Assistant Professor, Dept. of Computer Science and Engineering
Matrusri Engineering College, Hyderabad-59. lraghavendarraju@matrusri.edu.in

M Venkata Krishna Reddy

Assistant Professor, M.Tech (CSE), (Ph.D.), Dept. Of Computer Science and Engineering,
Chaitanya Bharathi Institute of Technology (A), Gandipet, Hyderabad - 500075
krishnareddy_cse@cbit.ac.in

B Ramana Reddy

Assistant Professor, M.Tech (CSE), (Ph.D.), Dept. Of Computer Science and Engineering,
Chaitanya Bharathi Institute of Technology (A), Gandipet, Hyderabad - 500075
bramanareddy_cse@cbit.ac.in

ABSTRACT

Our Invention "Health Monitoring using at Mega Microcontroller and IOT" The wellbeing observing framework has become famous these days because of uniqueness and expanded utilization in the clinical field. Ordinary many lives are impacted on the grounds that the illnesses are not ideal and appropriately analyzed so we didn't get an opportunity to give clinical assistance. To manage these sorts of circumstances, this framework will assist with observing a patient's sure boundaries and anticipate the patient's condition from time to time. This framework is easy to understand and lessens the human endeavors. This invention provides us with the improvement of a microcontroller based framework for

34

ISBN: 978-1-956861-10-5. pp 48-59

Transformer Data Analysis for Predictive Maintenance

Springer Link

Proceedings of Second International Conference on Advances in Computer Engineering and

Transformer Data Analysis for Predictive Maintenance

Sreshta R. Putchala, Rithik Kotha, Vanitha Guda & Yellasiri Ramadevi

Conference paper | First Online: 22 February 2022
261 Accesses | 1 Citations

Part of the Algorithms for Intelligent Systems book series (AIS)

Abstract

The loads on the power lines in transmission and distribution electrical power grids change continuously. The load depends on various factors such as the season, time of the day, and consumer behavior. Natural anomalies like storms and earthquakes could also change the amount of power consumption in the grid. Varying loads can stress the grid and lead to failures. In this paper, we aim at investigating techniques that can predict the behavior of loads and characteristics with fine-grained precision at transformer level. Transformers can indicate the microelements of the power grids. We have studied the various components and utilization characteristics intending to predict failures or predict performance degradation. They could use multiple features over time to monitor and dynamically adapt the grid at run time. Predicting transformer characteristics can also help prevent failures (help with maintenance), utilization characteristics, and load balancing (to reduce the stress). We have investigated time series forecasting and evaluated and compared different techniques using an actual data set of the power grid load recorded at regular intervals obtained from the transformers. We have compared the traditional AR, MA, and ARIMA models and neural network-based methods such as LSTM and RNNs to see which of these techniques had the lowest forecasting error. Besides the forecasting, we studied the reliability of various transformer components, the dynamics, and the relationship between them using multiple correlation studies. Extensive statistical hypothesis testing techniques also learn the causal relationships between different indicators. Some patterns in the measurements of various metrics are identified using machine learning techniques—both supervised and unsupervised.

Cite this paper

Putchala, S.R., Kotha, R., Guda, V., Ramadevi, Y. (2022). Transformer Data Analysis for Predictive Maintenance. In: Reddy, A.B., Kiranmayee, B., Mukkamala, R.R., Srujan Raju, K. (eds) Proceedings of Second International Conference on Advances in Computer Engineering and Communication Systems. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-16-7389-4_21

Download citation

RIS ENW BIB

DOI

https://doi.org/10.1007/978-981-16-7389-4_21

Published	Publisher Name	Print ISBN
22 February 2022	Springer, Singapore	978-981-16-7388-7
Online ISBN	eBook Packages	
978-981-16-7389-4	Intelligent Technologies and Robotics Intelligent Technologies and Robotics (R0)	

A Peer - to- Peer Approach for Extending Wireless Network Base for Managing IoT Edge Devices Off-Gateway Range

Springer Link

Smart Intelligent Computing and Applications, Volume 1 pp 551–559 | Cite as

A Peer-to-Peer Approach for Extending Wireless Network Base for Managing IoT Edge Devices Off-Gateway Range

Ramadevi Yellasiri, Sujanavan Tiruvayipati, Sridevi Tumula & Khooturu Koutilya Reddy

Conference paper | First Online: 19 April 2022

106 Accesses

Part of the Smart Innovation, Systems and Technologies book series (SIST,volume 282)

Abstract

Internet of Things (IoT) is a feature of the future Internet that has been portrayed as a worldview which principally coordinates and empowers advancements and correspondence arrangements with an outstanding interest to characterize how current standard conventions could uphold the acknowledgment of the far technological vision. Inside this specific situation, remote sensor organizations close to handle radio correspondences directing conventions as an intent to their appropriateness toward IoT. Apart from the standard infrastructure components especially power and network which are absolutely necessary for IoT gadgets, there is also a need to eliminate such dependencies to make the IoT future ready. One such move in building wireless-fidelity (Wi-Fi) peer-to-peer (P2P) communication strategy for IoT gadgets is portrayed in the research work. An uncomplicated approach is proposed through this research in order to establish a network backbone among IoT gadgets and also make them self-powered without the need to rely on an external infrastructure. The proposed methodology would minimize the overall capital investment in IoT network and power infrastructure including their maintenance but with the trade-off for lower data rates on further expansion.

Check for updates

Cite this paper

Yellasiri, R., Tiruvayipati, S., Tumula, S., Reddy, K.K. (2022). A Peer-to-Peer Approach for Extending Wireless Network Base for Managing IoT Edge Devices Off-Gateway Range. In: Bhateja, V., Satapathy, S.C., Travieso-Gonzalez, C.M., Adilakshmi, T. (eds) Smart Intelligent Computing and Applications, Volume 1. Smart Innovation, Systems and Technologies, vol 282. Springer, Singapore. https://doi.org/10.1007/978-981-16-9669-5_50

Download citation

RIS ENW BIB

DOI

https://doi.org/10.1007/978-981-16-9669-5_50

Published	Publisher Name	Print ISBN
19 April 2022	Springer, Singapore	978-981-16-9668-8
Online ISBN	eBook Packages	
978-981-16-9669-5	Intelligent Technologies and Robotics Intelligent Technologies and Robotics (R0)	

5G Heterogeneous Network in Vertical Handoff for Making Enhanched Decision Algorithm

5G heterogeneous network in vertical handoff for making enhanced decision algorithm

Show affiliations

Kumar, P. Pramod ; Sagar, K.

In modern days, wireless networks have played an important role, as many smart phone users continue to grow daily. As the wireless network progresses to 5G networks using Cloud-RAN technology, which offers high efficiency mobile-based broadband wireless networks. The 5G is evolving as it offers a seamless communication for video over IP, Voice over IP, etc. Cloud-based mobile networks are served and used by various network operators for the existing networking services. We have considered vehicle networks here as they access information on the internet and they have many applications such as email, surfing, GPS, and so on. Helps the wireless vehicle network act in such a way. In order to handle and provide large quantities of data with the efficient use of reliable means between the reliable Communication we suggest an enhanced transfer-based decision-making strategy. This approach suggests the initiation of the transition and handover decision algorithms, which supports and tracks movement changes in mobile nodes in the specific infrastructure by different times. In these two algorithms, the transfer decision is taken on the basis of the travelled complex route and started. Using the access router, the user is set to a saturation level that decreases resource utilization to perform the transfer operation. The place co-ordinates with three co-ordinates along with a certain mobility model are considered here on the basis of performance analyses. When a continuous connectivity flow occurs in the vehicle's wireless networks the time delay analysis is measured, which helps boost QOS.

Publication:	AIP Conference Proceedings, Volume 2418, Issue 1, id.020004, 14 pp.
Pub Date:	May 2022
DOI:	10.1063/5.0081762
Bibcode:	2022AIPC.2418b0004K

An Affordable Multitasking Drone for Smart Framing with the Artificial Intelligence Feature

No Access • Published Online: 24 May 2022

An affordable multitasking drone for smart farming with the artificial intelligence feature

AIP Conference Proceedings **2418**, 020002 (2022); https://doi.org/10.1063/5.0081755

P. Pramod Kumar[1,a)], R. Akshay[2], Nethaji Achha[2], K. Sagar[3], V. Thirupathi[2], *and* G. Ranadheer Reddy[4]

View Affiliations View Contributors

PDF E-READER ABSTRACT TOOLS SHARE

TOPICS

- Careers and professions
- Pesticides
- Food
- Fungi
- Artificial intelligence

ABSTRACT

Agriculture is one of the essential aspects in any country's development, as it provides the major source of food, employment, for its importance in nation's revenue and international Trades. India is one such country which depends on agriculture for its economic growth. Indian agriculture sector accounts for 18% of the country's GDP and it provides employment for more than 50% of rural population. As many of the Indian farmers are still using the traditional technologies in farming which are integrated more with hard work than smart

An Efficient VHO Algorithm to Enhance QoS in Internet of Vechiles with the Integration of 5G

Proceedings of the International Conference on Electronics and Renewable Systems (ICEARS 2022)
IEEE Xplore Part Number: CFP22AV9-ART; ISBN: 978-1-6654-8425-1

An Efficient VHO Algorithm to Enhance QoS in Internet of Vehicles with the Integration of 5G

Pramod Kumar P
Department of Computer Science and Artificial Intelligence
SR University
Warangal, India
pramodpofadv111@gmail.com

Akshay B
Department of Computer Science and Engineering
S R Engineering College
Warangal, India
akshayramagiri55@gmail.com

Sagar K
Department of Computer Science and Engineering
Chaitanya Bharathi Institute of Technology
Hyderabad, India
kadapasagar@gmail.com

***Abstract*— In a developing country such as India, the intellection of smart city and the boom for a wide range of vehicles, Internet of Vehicles (IoV) has gained a lot of consideration by furnishing numerous benefits, including traffic congestion control, smart parking, vehicle emergency and monitoring levels of pollution. Furthermore, IoV provides support for vehicles over internet aid communication. In order to have a better communication between Vehicle-to-Everything (V2X), an advanced network infrastructure is required. The currently available networks like 3rd generation (3G), 4th generation (4G) or long term evolution (LTE) are not adequate for these kinds of communications; There comes the 5th Generation (5G) cellular network into the picture. The 5G offers real-time crowd sourcing, higher data rates, low latency for transmission and sensing as a complementary base for information. In addition to the leading edge network infrastructure, the mobility of vehicles urges to have a perfect handover (HO) mechanism among heterogeneous networks. This paper discuss about the integration IoV with 5G and the importance of vertical handover (VHO) mechanism using an Artificial Intelligent algorithm and analyze its performance based on few of the parameters such as data transfer rate, transmission delay, mean throughput, packet delivery ratio (PDR) and Quality of Service (QoS).**

Keywords*— *IoV, V2X, Smart City, 4G, 5G, LTE, Heterogeneous Network, Handover, VHO, PDR, QoS.

I. INTRODUCTION

A heterogeneous network is the one that applys a various kinds of access technologies. It is also used in wireless networks, such as a wireless network that provides service over a wireless Local Area Network (LAN) on the other hand, being able to preserve service while shifting to a cellular network [2]

A handover is a telecommunication & mobile communications course of action during which a associated cellular call or data session is switched from one person to another. Horizontal Handover: When a user switches between two individual network access points of the same type, then it is known as horizontal handover. When a user switches between two different network access points of distinct kinds, then it is known as vertical handover. Handover is also known as handoff. The process of handover is illustrated in Fig. 1.

Fig. 1. Handover process

A. Horizontal Handover: When a user switches between two individual network access points of the same type, then it is known as horizontal handover.

B. Vertical Handover: When a user switches between two different network access points of distinct kinds, then it is known as vertical handover.

Fig. 2 depicts the different types of handover mechanism.

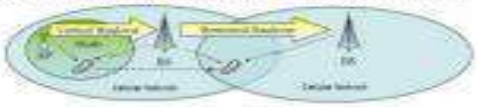


Fig. 2. Handover Types

Fig. 3 a), b) shows the present and future handover scenarios.

978-1-6654-8425-1/22/$31.00 ©2022 IEEE

Futuristic IoT- Enabled Toilet Maintenance System to Avoid Disease Transmission at Public Toilets in Smart Cities

Proceedings of the International Conference on Sustainable Computing and Data Communication Systems (ICSCDS-2022)
IEEE Xplore Part Number: CFP22AZ5-ART; ISBN: 978-1-6654-7884-7

Futuristic IoT-Enabled Toilet Maintenance System to Avoid Disease Transmission at Public Toilets in Smart Cities

Pramod Kumar P
Department of Computer Science & Artificial Intelligence
SR University
Warangal, India
pramodpoladi111@gmail.com

Akshay R
Department of Computer Science and Engineering
SR Engineering College
Warangal, India
akshayramagiri55@gmail.com

Nethaji Achha
Department of Electronics and Communication Engineering
SR Engineering College
Warangal, India
achhanethaji144@gmail.com

Sagar K
Department of Computer Science and Engineering
Chaithanya Bharathi Institute of Technology
Hyderabad, India
kadapasagar@gmail.com

Thirupathi V
Department of Computer Science & Artificial Intelligence
SR University
Warangal, India
Thirulu629@gmail.com

Srinivas M
Department of Computer Science & Artificial Intelligence
SR University
Warangal, India
madhirasri@gmail.com

54-7884-7/22/$31.00 ©2022 IEEE | DOI: 10.1109/ICSCDS53736.2022.9760987

***Abstract*— In the present ingenious world, every country is accelerating in the process of developing smart cities. As a part of developing smart cities, public toilets have been entrenched at every nook and corner of the country. Yet, the hygiene and cleanliness in our country are at gunpoint due to the improper maintenance of public toilets. Because of this reason, though there are many public toilets available, people are not ready to use them with the fear of getting infected or falling sick after using the public toilet that is not properly maintained. This paper proposes a** than curing the people after they get infected [10], [12]. Based on the same principle, this paper proposes an idea to prevent the spread of diseases caused by using poorly maintained public toilets. This paper presents the scheme for smart toilets by integrating public toilets with IoT devices such as sensors, liquid crystal display (LCD), light-emitting diode (LED), and a smart testing toolkit.

A. Arduino UNO

Arduino Uno (Fig 1) is a microcontroller board developed by Arduino.cc, which is an open-source

Proceedings of the International Conference on Electronics and Renewable Systems (ICEARS 2022)
IEEE Xplore Part Number: CFP22AV8-ART; ISBN: 978-1-6654-8425-1

A Proficient Vertical Handover Decision Making Algorithm in Internet of Vehicles with 5G

Pramod Kumar P
Research Scholar
University College of Engineering
Osmania University
Hyderabad, India
pramodpoladi111@gmail.com

Pramod Kumar P
Department *of Computer Science and Artificial Intelligence*
SR University
Warangal, India
pramodpoladi111@gmail.com

Sagar K
Department of Computer Science and Engineering
Chaithanya Bharathi Institute of Technology
Hyderabad, India
kadapasagar@gmail.com

978-1-6654-8425-1/22/$31.00 ©2022 IEEE | DOI: 10.1109/ICEARS53579.2022.9751892

***Abstract*—As known, usage of mobile devices are enormously increasing day by day and these devices are being used in different applications where the user satisfaction, seamless connectivity, Quality of Service(QoS) and service among heterogeneous networks are very important features. These mobile devices have been introduced to include features such as advanced wireless technology support, seamless mobile networking, increased processing speed and improved multimedia services in recent days. These services allow the service provider to satisfy customers with enhanced service quality. Recently, the vehicle ecosystem emerged in the Internet of Vehicles (IoV); it involves the computational processing of moving vehicles to perform dynamic operations with wireless feature. To offer reliable services, Heterogeneous Wireless Networks**

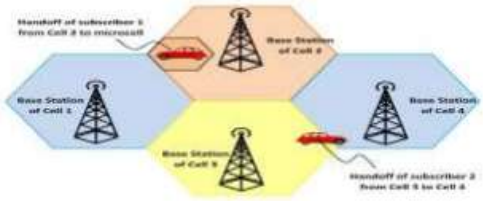


Fig. 1. Handover process

1.1. **Horizontal Handover:** When a user transitions between two separate network access points of

Proceedings of the International Conference on Applied Artificial Intelligence and Computing (ICAAIC 2022)
IEEE Xplore Part Number: CFP22BC3-ART; ISBN: 978-1-6654-9710-7

A Three-Level Gateway protocol for secure M-Commerce Transactions using Encrypted OTP

S. Ramana
Research Scholar,
Dept. of Computer Science,
Osmania University, Hyderabad,
Telangana, India.
ramana_msc008@yahoo.co.in

S China Ramu
Professor,
Dept. of CSE,
CBIT (A), Hyderabad, Telangana, India
Chinaramu_cse@cbit.ac.in

N. Bhaskar
Lecturer,
Dept. of Computer Science,
Bhavan's Vivekananda College,
Sainikpuri, Secunderabad,
Telangana, India.
niraghatam@gmail.com

M. V. Ramana Murthy
Former Professor & Chairman
Computer Science,
Dept. of Mathematics, Osmania University
Presently working at MGIT
Hyderabad, Telangana, India.
mv.rm50@gmail.com

C. R. K. Reddy
Professor and Head,
Dept. of CSE,
MGIT, Hyderabad, Telangana, India
crkreddy@gmail.com

2/$31.00 ©2022 IEEE | DOI: 10.1109/ICAAIC53929.2022.9792908

***Abstract*— Mobile commerce, which began in ancient times as the trade system, has grown in the ultramodern age due to improvements in technology, the Internet, the use of Financial Coffers, and the lives of mortal humans. There was a significant extemporization in the tackle industry and concurrent software development that led to a wide range of uses for computers and mobile phones. Ninety percent of people who take prescription drugs do so on handhelds, laptops, or cellphones, and the lives of mortals have been profoundly altered as a result of the smart operations available on mobile systems, which may be utilized at any time and from** the usage, operation, and integration of wireless telephony technologies and wireless bias, such as Internet-enabled mobile phones, specific digital sidekicks (PDA), palmtops, and laptops. Standard structures and electronic technologies necessary for wireless mobile data and knowledge transmission in textbook, plate, audio, and videotape formats are included in the M-Commerce Operations Factors. From e-commerce, which was formerly known as M-Commerce, comes the idea of 'position-independent connection' in a wireless networking environment that includes PDAs,

Association and Correlation Analysis for Predicting the Anomaly in the Stock Market

Association and Correlation Analysis for Predicting the Anomaly in the Stock Market

R. Ravinder Reddy ✉, M. Venkata Krishna Reddy & L. Raghavender Raju

Conference paper | First Online: 28 October 2022

Part of the Lecture Notes in Networks and Systems book series (LNNS,volume 494)

Abstract

The stock market is more volatile and fluctuate along with the time, the rapid change of the price value; it is very difficult to predict the price of the stock. Stock market price is mostly determined by the demand of the stock, which is determined by the gross purchase and sales. In the stock market, these are mostly done by the domestic intuitional investors (DII) and foreign intuitional investors (FII). Their percentage of investment is very huge compared to the retail investors in the market. The price change is mostly determined by the activity done by the FII and DII. The market price is dominated by the FII and DII; in this work, we identified the association and correlation between the FII and DII activities. The results show the suspicious anomaly between the FII and DII. In the Indian stock market, every day an average of 6.43 billion shares was traded depending on total composite volume. But surprisingly in the last one decade, the DII and FII are negatively correlated.

Cite this paper

Ravinder Reddy, R., Venkata Krishna Reddy, M., Raghavender Raju, L. (2023). Association and Correlation Analysis for Predicting the Anomaly in the Stock Market. In: Bhateja, V., Sunitha, K.V.N., Chen, YW., Zhang, YD. (eds) Intelligent System Design. Lecture Notes in Networks and Systems, vol 494. Springer, Singapore. https://doi.org/10.1007/978-981-19-4863-3_24

Download citation

.RIS .ENW .BIB

DOI

https://doi.org/10.1007/978-981-19-4863-3_24

Published	Publisher Name	Print ISBN
28 October 2022	Springer, Singapore	978-981-19-4862-6
Online ISBN	eBook Packages	
978-981-19-4863-3	Intelligent Technologies and Robotics Intelligent Technologies and Robotics (R0)	

Fake Account Detection in Social Media Using Big Data Analytics

Fake Account Detection in Social Media Using Big Data Analytics

Shaik Mujeeb & Sangeeta Gupta

Conference paper | First Online: 22 February 2022
248 Accesses | 1 Citations
Part of the Algorithms for Intelligent Systems book series (AIS)

Abstract

Social media has changed the environment by increasing the number of social media users; the advantage of online social media is that it is an easy way of communication between individuals in an efficient manner. This ends up in potential attacks, like fake identity or pretend and larva accounts, unfolding of info etc. In step with the knowledge shared during a survey, the amount of actual accounts in social media is far lesser than the present users, what is more is that this means the increasing quantity of pretended or fake accounts in recent years. The detection of pretended accounts in social media platforms, like Twitter, has been an important task in huge amounts of information. Online social media owners or suppliers face issues in pretend accounts detections. Old strategies cannot distinguish between real and pretended accounts expeditiously. To overcome the problem, new strategies were created that used completely different approaches like bots or automatic comments and posts, rotating false data or info unfold and spreading spam messages within the type of advertisements. These strategies are a unit accustomed to observe pretend accounts in online social media. The large increase within the pretend accounts has reduced the potency of classification algorithms such as support vector machines, naive Bayes and random forest. In this work, an innovative methodology to observe pretend accounts needs to be developed by employing a variation of gradient boosting algorithmic program with a call tree consisting of a group of attributes. This may lead to rising overall potency and subsume scalability because of the increasing range of users using social media. So, there is a necessity for a tool which can identify and detect the fake or pretend account and accurately make the difference between pretend and genuine accounts.

Cite this paper

Mujeeb, S., Gupta, S. (2022). Fake Account Detection in Social Media Using Big Data Analytics. In: Reddy, A.B., Kiranmayee, B., Mukkamala, R.R., Srujan Raju, K. (eds) Proceedings of Second International Conference on Advances in Computer Engineering and Communication Systems. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-16-7389-4_57

Download citation
.RIS .ENW .BIB

DOI
https://doi.org/10.1007/978-981-16-7389-4_57

Published	Publisher Name	Print ISBN
22 February 2022	Springer, Singapore	978-981-16-7388-7
Online ISBN	eBook Packages	
978-981-16-7389-4	Intelligent Technologies and Robotics Intelligent Technologies and Robotics (R0)	

Smart Home Infrastructure with Blockchain-Based Cloud IoT for Secure and Scalable User Access

Smart Home Infrastructure with Blockchain-Based Cloud IoT for Secure and Scalable User Access

Sangeeta Gupta, Kavita Agarwal & M. Venu Gopalachari

Conference paper | First Online: 01 January 2022

Part of the Algorithms for Intelligent Systems book series (AIS)

Abstract

Human beings in the modern world are greatly attracted towards using the smart gadgets that simplifies their daily routine-based activities, which is very essential after a tiresome day at work. Various devices including electronic and non-electronics like lockers are all controlled through a remote system that can be analysed in future iterations to trace the log of all operations. However, if this data is accessed by unauthorized users, then there is a great loss to be incurred by the house owners. On the other side, integration of IoT with blockchain will cater the need to overcome centralized behaviour in a distributed fashion. Also, security aspects need to be strengthened to overcome unprecedented loss of confidential information. Towards this end, the proposed work focuses on integration of the decentralized property of blockchain with data capturing aspects of IoT across multi-tenant environment in a secure way. In the proposed framework, multiple user access to multiple keys stored in secure private

Cite this paper

Gupta, S., Agarwal, K., Venu Gopalachari, M. (2022). Smart Home Infrastructure with Blockchain-Based Cloud IoT for Secure and Scalable User Access. In: Dua, M., Jain, A.K., Yadav, A., Kumar, N., Siarry, P. (eds) Proceedings of the International Conference on Paradigms of Communication, Computing and Data Sciences. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-16-5747-4_24

Download citation

.RIS .ENW .BIB

DOI
https://doi.org/10.1007/978-981-16-5747-4_24

Published	Publisher Name	Print ISBN
01 January 2022	Springer, Singapore	978-981-16-5746-7
Online ISBN	eBook Packages	
978-981-16-5747-4	Intelligent Technologies and Robotics Intelligent Technologies and Robotics (R0)	

ChefAI Text to Instructional Visualization Using Amazon Web Services

ChefAI Text to Instructional Visualization Using Amazon Web Services

Sangeeta Gupta, Saif Ali Athyaab & J. Harsh Raj

Conference paper | First Online: 19 April 2022

Part of the Smart Innovation, Systems and Technologies book series (SIST,volume 282)

Abstract

Food industry is one of the most widespread and rapidly growing one with scope for video content generation and analysis via social media. There is an immense rise in the popularity of videos based on food items preparation, as people watching these videos feel attached and involved in the process. Watching someone cook in person as a third person viewer is not as intuitive as watching a pair of hands cooking from the viewer's perspective. Therefore, in this work, we capitalize on Tasty Video datasets, a collection of 2511 recipes, in order to train a model on temporal dynamics for video-captioning and video-generation tasks. It is proposed to have a system to take in the recipe text and pass it through a transformer-based network to produce the cooking video. It is intended to qualitatively demonstrate the capability to generate plausible videos conditioning on the text as input. Moreover, quantitative experiments will be performed to validate the models using various metrics and human

Cite this paper

Gupta, S., Athyaab, S.A., Harsh Raj, J. (2022). ChefAI Text to Instructional Visualization Using Amazon Web Services. In: Bhateja, V., Satapathy, S.C., Travieso-Gonzalez, C.M., Adilakshmi, T. (eds) Smart Intelligent Computing and Applications, Volume 1. Smart Innovation, Systems and Technologies, vol 282. Springer, Singapore. https://doi.org/10.1007/978-981-16-9669-5_24

Download citation

.RIS .ENW .BIB

DOI
https://doi.org/10.1007/978-981-16-9669-5_24

Published	Publisher Name	Print ISBN
19 April 2022	Springer, Singapore	978-981-16-9668-8
Online ISBN	eBook Packages	
978-981-16-9669-5	Intelligent Technologies and Robotics Intelligent Technologies and Robotics (R0)	

Sports Results Prediction Using Supervised Learning

Aayushi International Interdisciplinary Research Journal (ISSN 2349-638x) Impact Factor 7.331
Peer Reviewed Journal Email: - aiirjournal@gmail.com www.aiirjournal.com
April 2022

Sports Results Prediction Using Supervised Learning

1 Kavita Goura, 2 Dr. Anita Harsoor , 3. Ch. Vijayal.akshmi
CSE-department,
Chaitanya Bharathi Institute of Technology , PDA college of Engineering , Chaitanya Bharathi Institute of Technology
Hyderabad, INDIA, Kalaburagi, INDIA, Hyderabad, INDIA

Abstract-

Different Machine Learning techniques are used to predict the score and outcome of various sports. We have analyzed different model design hypotheses to assess our model's performance which helped us choose the best algorithm to predict the winner of the match. The main algorithm used is logistic regression however, for collating, Support VectorMachine (SVM) and Naive Bayes has been used.

Predictive analysis has enforced the prediction of success rate of each team depending on the statistics of previous matches or tournaments which would help others to see where they stand andwho their competitors are. Sports managers are striving to model appropriate strategies that can work well for assessing the opponent's potential in a match. The challenge of predicting sports results is based on several parameters and it differs from sport to sport. So, it is important to consider all the essential ones in order to increase the accuracy rather than just focusing on the score to predict the outcome. Also, this area has always been something interesting for sports fanatics, magazine makers and others who are interested in approximating the odds of a game in advance. This system would aid in easy generation of results, display of ranking and regulating the selection of the tournament dates.

Keywords- Logistic regression, Support Vector Machine (SVM), Predictive Analysis

I. Introduction

A system for predicting the results of various sports matches that are based on previous results ofthe team's performance and conduct. We also strive to find accurate probabilities for a home win,a draw, or an away win for each match.

A particularly important element of Data Science in sports like football and cricket is the ability to evaluate a team's performance in games and use that information to attempt to predict the resultof future games based on this data. Outcomes from sports matches can be difficult to predict, withsurpeises often popping up. Football is an interesting example as matches have fixed length. It alsopossesses a single type of scoring event: goals that can happen an infinite amount of times duringa match, and which are all worth 1 point. The possible outcomes for a team taking part in a footballmatch are win, lose or draw. Similarly, in cricket, the possible outcomes are same as football. Butthere are many parameters for consideration like teams, runs per over, overall runs, run rate etc. Normally, predictions are done based on goals or runs for respective sport and it can therefore seem quite straightforward to predict the outcome of a game. Traditional predictive methods havesimply used match results to evaluate team performance and build statistical models to predict theresults of future games. For instance, a team with many scoring opportunities could be unlucky and convert some of their opportunities into goals or runs, whereas a team with a single scoring opportunity could score a point. This makes match results an imperfect measure of a team's performance and therefore an incomplete metric on which to predict future results.

Our primary goal is to create a model that predicts outcome of a sports match with sufficient accuracy. This accuracy can be determined by attaining 70% precision when predicting results of the match. More specifically, every match consists of characteristics of the players and thematch and based on these features our algorithms predict the outcome. The outcome is, for example in tennis where zero bit (0) corresponds to a win for Player 1 and one bit (1) a win for Player 2. No draw is possible here. In sports where a draw is possible, other representationsare necessary. In contrast to tennis, a draw is possible in football and cricket, and we have shroud both the scenarios.

Proposed System:

Deliberating the existing system, we have come up with the idea of using multiple classification and regression techniques namely Logistic Regression, SVM, Naïve Bayes, etc and with the helpof few technologies like Weka to anticipate the results. We have considered the factors like scores,home and away team (for any sport), strategies used, time, location (city and country) etc. Using such methods, we have compared as to which

Quantifying Nodes Trustworthiness using Hybrid Approach for Secure Routing in Mobile Ad hoc Networks

Quantifying Nodes Trustworthiness Using Hybrid Approach for Secure Routing in Mobile Ad Hoc Networks

M. Venkata Krishna Reddy ✉, P. V. S. Srinivas & M. Chandra Mohan

Conference paper | First Online: 28 July 2022

114 Accesses

Part of the Communications in Computer and Information Science book series (CCIS,volume 1613)

Abstract

Mobile Adhoc Networks (MANET) is a group of moving nodes where these nodes communicate each other through wireless links thus forming adhoc network. Each node works as router and forward packets from source to destination. Multiple wireless devices that connects on the fly in any situation are being gained importance today. These devices are flexible in nature, ad hoc and they can be temporarily setup at any point of time, in any place. These networks have lesser infrastructure costs due to decentralized administration. Message routing in those networks has become more difficult because of their innate dynamic character combined with restrictions like limited energy power, less bandwidth, wireless communication transmit nature and intervention of signals. Due to infrastructure less dynamic topology, distribution of bandwidth and limitations on resource usage among mobile nodes, the secure data transmission between source and destination is always a challenge. Security is always a critical concern in providing quality of service (QoS) and secure routing in MANET's since the presence of malicious nodes in the network pose all possible threats to MANETs. Many mechanisms exist and proposed to solve security issues in routing. But all those are complex and not properly addressing the elimination of malicious/selfish nodes. In this article, a new approach collaborative Trust Based Approach (CTBA) is proposed to provide node authentication using trust factor by combining direct and neighbor observations to form resultant collaborative trust before initiating route discovery process for performing data transmission in MANET's. Simulation results has proved that proposed CTBA approach performs well and fine compared to the routing without nodes trust calculation.

Cite this paper

Reddy, M.V.K., Srinivas, P.V.S., Mohan, M.C. (2022). Quantifying Nodes Trustworthiness Using Hybrid Approach for Secure Routing in Mobile Ad Hoc Networks. In: Singh, M., Tyagi, V., Gupta, P.K., Flusser, J., Ören, T. (eds) Advances in Computing and Data Sciences. ICACDS 2022. Communications in Computer and Information Science, vol 1613. Springer, Cham. https://doi.org/10.1007/978-3-031-12638-3_29

Download citation

.RIS ★ .ENW ★ .BIB ★

DOI

https://doi.org/10.1007/978-3-031-12638-3_29

Published	Publisher Name	Print ISBN
28 July 2022	Springer, Cham	978-3-031-12637-6
Online ISBN	eBook Packages	
978-3-031-12638-3	Computer Science Computer Science (R0)	

Virtual Machine allocation in multiple Data Centers using Throttled Load Balancing to improve the performance in Cloud

Virtual Machine allocation in multiple Data Centers using Throttled Load Balancing to improve the performance in Cloud

Ramana Reddy B
Dept of CSE
Chaitanya Bharathi Institute of Technology
Hyderabad, Telangana
ramanareddy1984@gmail.com

Indiramma M
Dept of CSE
B.M.S College of Engineering
Bangalore indira.csc@bmsce.ac.in

2021 First International Conference on Artificial Intelligence Trends and Pattern Recognition (ICAITPR) | 978-1-6654-2824-6/21/$31.00 ©2021 IEEE | DOI: 10.1109/ICAITPR51569.2021.9444630

***Abstract*—Today, Cloud Computing is a distributed system environment. These days the services are available pay as you go model. Cloud users are paying as per their services in the cloud environment. The services available to the Cloud users are Infrastructure as a service, platform as a service, software as a service and security as a service. Nowadays, most users are migrating to cloud platforms. In Covid - 19 pandemic situation, most large and small scale organizations operating their business using cloud platforms. On the other end due to industrial automation, the companies switched their operations to a cloud environments. Due to the rapid business migration, the demand for cloud computing increased. With the increase of demand in the cloud, the service providers are satisfied. On the other end, a challenging issue is resource allocation. The best resource allocation strategy will provide quick services to the cloud users and minimum cost to the cloud providers. In this paper, we will discuss , resource allocation procedure, the throttled load balancing algorithm and the results are compared with other resource optimization techniques.**

***Index Terms*—Cloud Computing, Cloud Analyst, Virtual Machines, Data Center, Load Balancing**

I. Introduction

Nowadays, Cloud computing is one of the most recent moving advances. It has a property simple to utilize and cost improvement administrations. It has such countless qualities out of which dependability, virtualization, performing multiple tasks, framework cost enhancement and the assistance of referenced highlights. Cloud computing is the stepping innovation. Today Cloud computing is utilized by many numerous startups. Business visionaries are saving their expense, time and working space by utilizing PCs to associate the cloud benefits as opposed to buying the Foundation. Cloud computing in short, the services are available pay as you go model. Due to this, so many short-time requirement users are using Cloud computing services.

There are many MNC's providing cloud services such as Amazon web services, Microsoft etc. [1]. The Cloud services are Infrastructure as a service(Iaas), platform as a service(Paas), Software as a service(Saas). Here, AWS EC2 instances are an example of Infrastructure as a service. Microsoft Azure is an example of a platform as a service; Google apps are examples of Software as a service.

Because of user-friendly, quickly to up the services and ease of doing business model, cloud services are used by many users. This increased their dynamic demand in cloud computing. Due to this, Load balancing came into the picture in Data centres. Before applying any algorithm in Data centre, for resource allocation, we need to know about the performance of the algorithm. For this reason, we are working on different algorithms. In this paper, we compare the results using Cloud Analyst Simulator.

II. Load Balancing Algorithms

A. Round Robin Load Balancing Algorithm

Round Robin is the most straight forward algorithm that uses the concept of quantum time. In Round Robin, each virtual machine will get quantum time. Once quantum time completes, the turn will get another virtual machine. If the quantum time is very large, then the round-robin algorithm acts as an First come First serve.

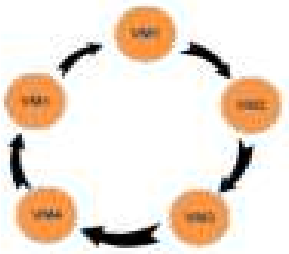


Fig. 1. RoundRobin Load balancing

X3DOM framework for rendering techniques

Certificate No:
CVRU-CON 2022/CivilMech/PR/19

CVRU-CON 2022

INTERNATIONAL CONFERENCE ON THE ANCIENT INDIAN KNOWLEDGE SYSTEM FOR HOLISTIC DEVELOPMENT

In

Engineering & Technology

On

28th & 29th January 2022

Organized By

Department of Civil & Mechanical Engineering
&
Internal Quality Assurance Cell

Dr. C. V. Raman University

Kargi Road, Kota, Bilaspur, Chhattisgarh (INDIA)

CERTIFICATE

This is to Certify that Prof./Dr./Ms/Mr.

DR. G. N. R. PRASAD, ASSISTANT PROFESSOR

Chaitanya Bharathi Institute of Technology has

Presented a paper (Oral/Poster)/ Participated in the **International E-Conference**

[CVRU-CON 2022] on THE ANCIENT INDIAN KNOWLEDGE SYSTEM FOR

HOLISTIC DEVELOPMENT, entitled X3DOM Framework For Rendering Techniques

during this Conference on 28th - 29th of January, 2022.

Dr. Jayati Chatterjee Mitra	Mr. Gaurav Shukla	Dr. Nitin Shukla
(Pro-Vice Chancellor & Coordinator, IQAC))	(Registrar)	Convener (CVRU-CON 2022)

Smart Villages-Scope for IoT and Cloud Applications

BENTHAM SCIENCE

REGISTER TO OUR FREE NEWSLETTER FOR U

Search here...

Login Register Cart 0

Artificial Intelligence for Smart Cities and Villages: Advanced Technologies, Development, and Challenges

Back Book Details

Smart Villages-Scope for IoT and Cloud Applications

Author(s): P Lalitha S. Kumari*, Pasupuleti Sailaja, Kommera K. Keerthana and Rasineni M. Mohana

Pp: 216-246 (31)

Doi: 10.2174/9789815049251122010015

Buy Chapters 15

* (Excluding Mailing and Handling)

Abstract

This chapter gives information on how the Internet of Things (IoT) can be utilized for the benefit of the population in rural areas. The IoT has many applications such as those for household, vigilance, sensor monitoring, actuators, intelligent displays, and vehicles. Thus, the IoT will bring unimaginable benefits and help humans lead a smart life. Smart rural development allows high yield agriculture, efficient health care, optimization of energy management, good sanitation, reduction in water wastage, and enhancement of the irrigation system using new technologies. Initially, this chapter describes technologies of IoT such as IoT Architecture, Sensors/Devices details, the configuration of Data, and coding possibilities with their Examples. This chapter also discusses how the cloud is integrated with IoT, Web Services and IoT Services on the cloud, cloud Interfaces and tools for IoT, and storage of IoT data on the cloud. This chapter also discusses different case studies that can be applied for different applications in rural areas. The IoT technology thus used in various spheres of village life will enhance the development of rural areas making them financially strong, improving the quality of village life, and helping them to become smart villages.

Keywords: Arduino nano senseboard, Cloud architecture, Internet of Things, IoT app development platforms, Raspberry PI, Sensors, Smart rural development.

Cite as

Related Journals

Recent Patents on Nanotechnology

View More >>

Related Books

Advances in III-V Semiconductor Nanowires and Nanodevices

View More >>

{

1/2

A Novel DDOS Attack Detection and Prevention Using DSA-DPI Method

International Conference on Innovative Computing and Communications pp 733–743

A Novel DDOS Attack Detection and Prevention Using DSA-DPI Method

V. Deeban Chakravarthy, K. L. N. C. Prakash, Kadiyala Ramana & Thippa Reddy Gadekallu

Conference paper | First Online: 08 November 2022

Part of the Lecture Notes in Networks and Systems book series (LNNS,volume 492)

Abstract

In the current Internet world, connection of computers, IoT devices, and mobile devices together becomes common activity. Because of the enormous advantages available with the Internet, many applications are

Proceedings of the International Conference on Edge Computing and Applications (ICECAA 2022)
IEEE Xplore Part Number: CFP22BV8-ART; ISBN: 978-1-6654-8232-5

An Integrated Approach Towards Stock Price Prediction using LSTM Algorithm

1st Kummari Vikas
Department Of CSE
Vardhaman College Of Engineering
Hyderabad, India
kummarivikas.11@gmail.com

2nd Kamal Kotgire
Department Of CSE
Vardhaman College Of Engineering
Hyderabad, India
kotgire58@gmail.com

3rd Bayyapu Sai Prudhvi Reddy
Department Of CSE
Vardhaman College Of Engineering
Hyderabad, India
saiprudhvi369@gmail.com

4th Akula Sai Krishna Teja
Department Of CSE
Vardhaman College Of Engineering
Hyderabad, India
krishnalalith999@gmail.com

5th H Venkateswara Reddy
Department Of CSE
Vardhaman College Of Engineering
Hyderabad, India
h.venkateswarareddy@vardhaman.org

6th Shobarani Salvadi
Department Of Information Technology
Chaitanya Bharathi Institute of Technology
Hyderabad, India
reddymallashobarani2@gmail.com

2022 International Conference on Edge Computing and Applications (ICECAA) | 978-1-6654-8232-5/22/$31.00 ©2022 IEEE | DOI: 10.1109/ICECAA55415.2022.9936082

***Abstract*— Investing in stock markets is always a bit complex and unpredictable for numerous reasons. This study is made by an extensive study of various machine learning and deep learning algorithms which would help reducing the risk in predicting the stock prices. As part of the study, Tehran Stock Exchange is considered in the sectors of non-metallic minerals, basic metals, and finance for testing new ideas. Various algorithms such as extreme Gradient Boost (XGBoost), Support Vector Machine, Random Forest, Decision Tree, K-Nearest Neighbors, Naive Bayes, Logistic Regression and Artificial Neural Network (ANN) are explored, compared, and analyzed in this work. Apart from the above-mentioned algorithms, this research study has used two powerful deep learning techniques, they are Recurrent Neural Network (RNN) and Long Short-Term Memory (LSTM). This research study will implement around ten technical indicators that have been gathered over a decade. Stock trading values are utilized to calculate the indicators whereas, binary data is used to convert the indicators. Each prediction model is evaluated by three metrics based on the input way. For continuous data, the evaluation results depict that RNN, and LSTM overcome other prediction models to a greater extent. These deep learning are equally good at evaluating binary data, but this difference hinders due to a considerable enhancement in the model's performance.**

Keywords—Recurrent Neural Network, Long Short-Term Memory, Artificial Neural Network, Stock Price.

I. Introduction

Forecasting the stock prices accurately has always been a critical issue for a majority of economic and financial experts. The fluctuating and unpredictable nature of this field made the study even harder [1]. The companies which purchase stocks that are expected to rise and sell them whose stock price is going to fall is the key takeaway in this study. There are two basic steps involved in predicting stock market, first being the fundamental information based on the position of company in market and second, the expenses, annual increase rates which are used for crucial analysis.

Past years analysis such as charts and patterns of how the stock price is varying, it makes the future prediction easier and more accurate [2]. As everyone else, even data scientists face similar difficulties while making predictions of stock market. Due to the riskiness and uncertainty in stock market field, investors face two major problems: one being the political climate in a particular country and second being the interest, opinion of public over stocks in that nation [3].

With careful management, the data regarding stock prices can be used in prediction of future stock values and indexes. The prediction of share market can highly get influenced by the deep learning models and social media sentimental analysis [4] [5].

These techniques are created to automatically learn and analyse from large piles of data. There is no hard and fast rule that can predict the future of a stock because it depends not only on the past analysis but also the pulse of public's view over it. [6] RNN and LSTM are the two deep learning methods applied in this work to predict the nature of stock prices [7]. To feed the models, ten technical indicators are used and further to evaluate the impact of pre-processing, two different ways are used: one being continuous data and second being binary data.

The format of the paper is as follows: The introduction is discussed in Section I. The summary of prior initiatives and associated work on stock prediction, existing system and flowchart is presented in Section II. Section III discusses the proposed approach. Section IV details the implementation of the project which includes the pre-processing and front-end server. section V briefs about the experimental results of the work and finally the conclusion and future scope are covered as part of Section VI.

II. Literature Survey

A. Stock Market

Over a period, there has been a sharp increase in the number of people doing communications, trading, and transactions of assets in stock market. This became

Black Box Models for eXplainable Artificial Intelligence

Explainable AI: Foundations, Methodologies and Applications pp 1–24

Black Box Models for eXplainable Artificial Intelligence

Krishna Keerthi Chennam ✉, Swapna Mudrakola, V. Uma Maheswari, Rajanikanth Aluvalu & K. Gangadhara Rao

Chapter | First Online: 20 October 2022

Part of the Intelligent Systems Reference Library book series (ISRL,volume 232)

Abstract

Machine learning algorithms are becoming popular nowadays in cyber security applications like Intrusion Detection Systems (IDS). Most of these models are anticipated as a Black Box. Previously black box was a model where the user cannot see the internal logic. To reach the goal of

Comparison of Machine Learning Algorithms for Hate and Offensive Speech Detection

Evolutionary Computing and Mobile Sustainable Networks pp 873–881

Comparison of Machine Learning Algorithms for Hate and Offensive Speech Detection

Mehant Kammakomati, P. V. Tarun Kumar & K. Radhika

Conference paper | First Online: 22 March 2022

329 Accesses

Part of the Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT,volume 116)

Abstract

Hate speech is not uncommon and is likely practiced almost on every networking platform. In recent times, due to exponential increase in Internet users and events such as the unprecedented pandemic and lockdown, it

An Integrated Number Plate Recognition System through images using Threshold-based methods and KNN

2022 International Conference on Decision Aid Sciences and Applications (DASA)

An Integrated Number Plate Recognition System through images using Threshold-based methods and KNN

Uma Maheswari V
Vardhaman College of Engineering
Hyderabad, India.
umamaheshwarriv999@gmail.com
https://orcid.org/0000-0001-8258-9987

Rajanikanth Aluvalu
Chaitanya Bharathi Institute of Technology(A)
Hyderabad, India
rajanikanth.aluvalu@ieee.org,
https://orcid.org/0000-0001-8508-6066

Swapna Mudrakola
Matrusri Engineering College
Hyderabad, India
swapna0801@gmail.com
http://orcid.org/0000-0003-2816-6857

2022 International Conference on Decision Aid Sciences and Applications (DASA) | 978-1-6654-9501-1/22/$31.00 ©2022 IEEE | DOI: 10.1109/DASA54658.2022.9765218

***Abstract*— In the last few decades, the use of vehicles in our daily life has become mandatory and increased drastically. Sometimes, controlling traffic and identifying vehicle owners manually becomes tedious due to crowd signals, which disobey the traffic rules and drive fast and abnormal. This demands an efficient and automatic system to solve the problem these days. Still, it is challenging in such cases as moving vehicles fast, font on number plate, illumination, etc. This led to developing efficient and automatic number plate detection as the solution. This paper presents automatic number plate detection with number diagnosis and tracking by applying various methods such as thresholding, morphological methods, contour detection, etc. Later, KNN is used for classification to improve accuracy. The proposed method tested on datasets DB1 and DB2 proves better in terms of accuracy, recognition rate, and retrieval rate.**

Keywords— *Image feature extraction, Morphological operations. Thresholding, Contour detection, KNN.*

1. Introduction

The exponential rise of traffic on road makes the people sometimes violating the traffic rules in rush or it may lead to unexpected incidents. The officials are responsible for finding the vehicle that has violated the traffic rules. It is even used in toll collection and identifying theft vehicles. This approach plays an important role in national security. In some countries, cross-border checking has to be done if any vehicle wants to cross from one country to the other. Identification of vehicle number can be used in a parking allotment system, and Number Plate detection system is useful in rigorous domains such as toll collection, border control,parking,finding the persons who violated the traffic rules, crime resolutions to help to find the vehicle of the offender, etc. [1][2].Its importance and significance have been increased in recent years, with many new technologies and applications that have been developed with high-level prediction and accuracy; further complex recognition tasks can be solved by improved machine learning with high accuracy, which makes this system vital.

Automatic number plate recognition helps identify the vehicle number plate efficiently without any human intervention. The government uses it to find the vehicles involved in the crime and look up a person who needs to pay the annual fees of the vehicle. It has become very important due to the increase in the number of vehicles on the road. The drastic improvement of image processing methods with machine learning helps to solve this problem. The main motive of the system is to identify the number plate in any condition. Still, the automatic number plate recognition implementation is not an easy task since it has enormous challenges of number plate variations and environment. As for the former, the style of text, location, the colour of text, tilted or bent number plate, and the varying lateral lighting, fog, dust, and background patterns significantly affect the number plate, and all these constitute challenges within the study. The automatic number plate recognition system is not a simple task since it faces various challenges due to the environment and variation in number plates [9][21]. As for the former, variation in background patterns or illumination significantly influences number plates. In effect, if variations in brightness can decrease the quality of the image and, for the latter, the location, textual style, colour, or slants of number plates constitute exceptionally challenging factors in advancing a steady, automatic number Plate Recognition system. Apart from this, it even faces various challenges like License plate will have some standard format in various developed countries. The attributes in the format include several lines to be included on the plate, license plate colour, size and shape of the plate, the colour of font, size of the font, and colour of every character or number on the plate [21][22][25][27].

Whereas in developing countries, the standard format for the license plate is not yet being initiated among various states, which makes the localization and recognition of license plates a complicated and tedious task, and even script used to write the license plate is not universal throughout the country, multiple scripts are used in the fig describes the overview of the license plates in variations insize, shape, script, and font, etc as shown in Fig.3.

2. Literature Survey

MdYeasir Arafat et al. (2020) proposed Automatic vehicle license plate recognition (AVLPR), initially preprocessing has done using a combination of grey scaling with arithmetic-based dilation, and features were extracted based on horizontal and vertical densities then applied Gaussian smoothing to reduce noise and improve the efficiency [2]. Yun Yang et al. (2018) proposed Chinese license plate recognition (CLPR); CNN has been used to extract the image features and classify but yields suboptimal results.

Computer Vision

DE GRUYTER

Ahead of Publication | Published by **De Gruyter** | 2023

Computer Vision

Applications of Visual AI and Image Processing

Edited by: Pancham Shukla, Rajanikanth Aluvalu, Shilpa Gite and Uma Maheswari

Volume 15 in the series De Gruyter Frontiers in Computational Intelligence

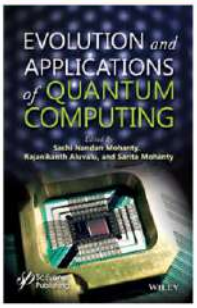
OVERVIEW

About this book

This book focuses on the latest developments in the fields of visual AI, image processing and computer vision. It shows research in basic techniques like image pre-processing, feature extraction, and enhancement, along with applications in biometrics, healthcare, neuroscience and forensics. The book highlights algorithms, processes, novel architectures and results underlying machine intelligence with detailed execution flow of models.

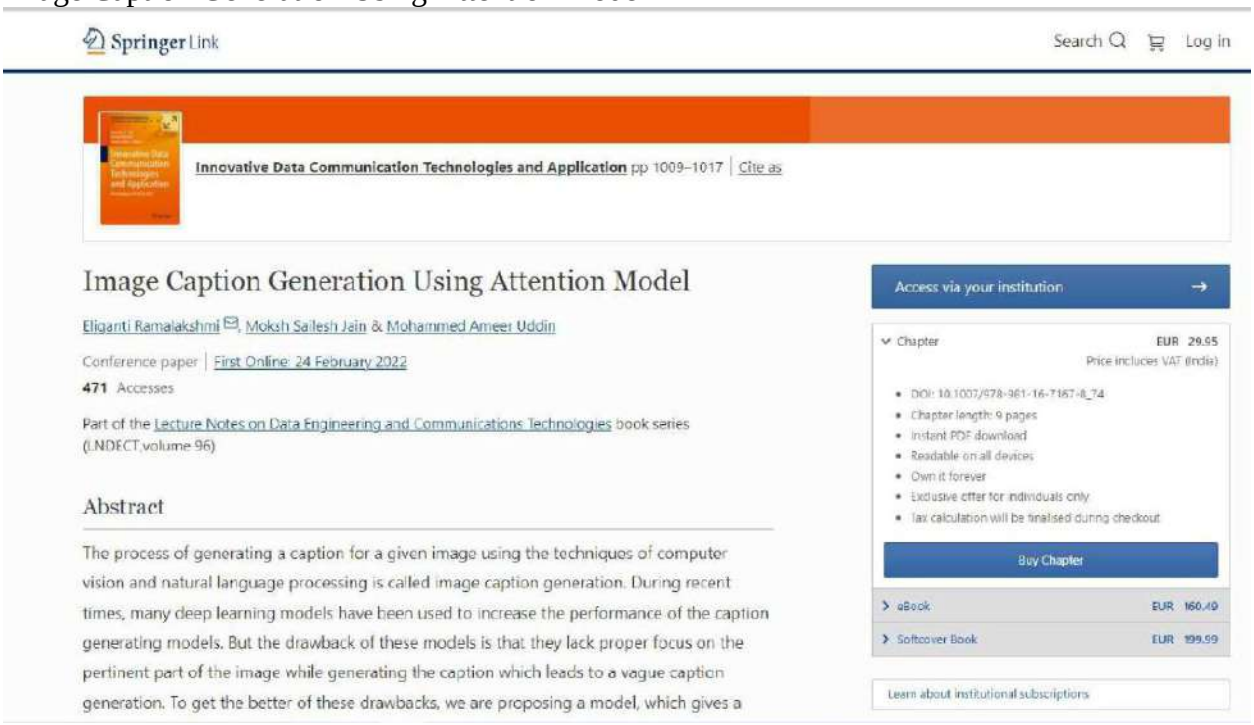
EVOLUTION AND APPLICATIONS OF QUANTUM COMPUTING

EVOLUTION AND APPLICATIONS OF QUANTUM COMPUTING



Edited by Sachi Nandan Mohanty, Rajanikanth Aluvalu and Sarita Mohanty
Copyright: 2023 | Expected Pub Date:2023/02/28
ISBN: 9781119904861 | Hardcover |

Image Caption Generation Using Attention Model



Springer Link

Search Log in

Innovative Data Communication Technologies and Application pp 1009–1017 | Cite as

Image Caption Generation Using Attention Model

Eliganti Ramalakshmi, Moksh Sailesh Jain & Mohammed Ameer Uddin

Conference paper | First Online: 24 February 2022

Part of the Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT,volume 96)

Abstract

The process of generating a caption for a given image using the techniques of computer vision and natural language processing is called image caption generation. During recent times, many deep learning models have been used to increase the performance of the caption generating models. But the drawback of these models is that they lack proper focus on the pertinent part of the image while generating the caption which leads to a vague caption generation. To get the better of these drawbacks, we are proposing a model, which gives a

e-copies of books and chapters in edited volumes/books published	
Title of the paper	**Web Links**
Power Generation Improvement in Partially Shaded Series-Parallel PV Arrays through Junction Wire	https://ieeexplore.ieee.org/document/9862902
Estimation of instantaneous shear modulus in neat resin and multi walled nanotube reinforced carbon epoxy composites by finite element analysis	https://link.springer.com/chapter/10.1007/978-981-16-6738-1_8
Study on Corrosion Resistant Materials for Centrifugal Pump Impeller	https://doi.org/10.9734/bpi/rdst/v5/6135F
Performance of a Semi Adiabatic Diesel Engine Fuelled with Jatropha Bio-diesel	https://doi.org/10.9734/bpi/tier/v4/2463A
IoT-Based Medication Reminder Devices: Design and Implementation	https://link.springer.com/referenceworkentry/10.1007/978-3-030-84205-5_106
Techno-economic and environmental impact analysis of biofuels produced from microalgal biomass	https://doi.org/10.1016/B978-0-323-90040-9.00006-0
Theranostics and Precision Medicine for the Management of Hepatocellular Carcinoma	https://www.elsevier.com/books/theranostics-and-precision-medicine-for-the-management-of-hepatocellular-carcinoma-volume-2/nagaraju/978-0-323-98807-0
Role of Enzymes in Biofuel Production: Recent Developments and Challenges	https://link.springer.com/chapter/10.1007/978-981-16-8090-8_4#:~:text=Enzymes%20used%20in%20the%20generation,them%20useful%20for%20biogas%20processing.
Techno-economic and environmental impact analysis of biofuels produced from microalgal biomass	https://doi.org/10.1016/B978-0-323-90040-9.00006-0
An Insight into Pullulan and Its Potential Applications	https://link.springer.com/referenceworkentry/10.1007/978-3-030-42215-8_15
Engineering Chemistry	
: Smart Technologies for Energy, Environment and Sustainable Development,	https://link.springer.com/chapter/10.1007/978-981-16-6875-3_44
For MCA Distance Education Students, Osmania university	
Machine Learning Using Python	
Health Monitoring Using at Mega Microcontroller and IoT	https://nevonprojects.com/health-monitoring-system-using-7-segment-display-atmega-microcontroller/
Transformer Data Analysis for Predictive Maintenance	https://link.springer.com/chapter/10.1007/978-981-16-7389-4_21
A Peer - to- Peer Approach for Extending Wireless Network Base for Managing IoT Edge Devices Off-Gateway Range	https://link.springer.com/chapter/10.1007/978-981-16-9669-5_50

5G Heterogeneous Network in Vertical Handoff for Making Enhanched Decision Algorithm	https://aip.scitation.org/doi/abs/10.1063/5.0081762
An Affordable Multitasking Drone for Smart Framing with the Artificial Intelligence Feature	https://aip.scitation.org/doi/abs/10.1063/5.0081755
An Efficient VHO Algorithm to Enhance QoS in Internet of Vechiles with the Integration of 5G	https://ieeexplore.ieee.org/document/9760987
Futuristic IoT- Enabled Toilet Maintenance System to Avoid Disease Transmission at Public Toilets in Smart Cities	https://ieeexplore.ieee.org/document/9760987
A Proficient Vertical Handover Decision Making Algorithm in Internet of Vehicles with 5	https://ieeexplore.ieee.org/document/9751892
A Three-Level Gateway Protocol for Secure M-Commerce Transactions using Encrypted OTP	https://ieeexplore.ieee.org/document/9792908
Association and Correlation Analysis for Predicting the Anomaly in the Stock Market	https://link.springer.com/chapter/10.1007/978-981-19-4863-3_24
Fake Account Detection in Social Media Using Big Data Analytics	https://link.springer.com/chapter/10.1007/978-981-16-7389-4_57#:~:text=In%20the%20proposed%20system%2C%20we,all%20the%20correct%20input%20sets.
Smart Home Infrastructure with Blockchain-Based Cloud IoT for Secure and Scalable User Access	https://link.springer.com/chapter/10.1007/978-981-16-5747-4_24#:~:text=Blockchain%2Dbased%20smart%20home%20gateway,integrity%2C%20authentication%20and%20efficient%20communication.
ChefAI Text to Instructional Visualization Using Amazon Web Services	https://link.springer.com/chapter/10.1007/978-981-16-9669-5_24
International Multidisciplinary E-Conference on Recent Innovations in Science and Technology(RIST-2022)	https://www.codespeedy.com/sports-predictor-using-python-in-machine-learning/
Sports Results Prediction Using Supervised Learning	https://link.springer.com/chapter/10.1007/978-3-031-12638-3_29
Quantifying Nodes Trustworthiness using Hybrid Approach for Secure Routing in Mobile Ad hoc Networks	https://ieeexplore.ieee.org/document/9844202
Virtual Machine allocation in multiple Data Centers using Throttled Load Balancing to improve the performance in Cloud	https://www.x3dom.org/
X3DOM framework for rendering techniques	https://www.eurekaselect.com/chapter/17454
Artificial Intelligence for Smart Cities and Villages: Advanced Technologies, Development, and Challenges	https://link.springer.com/chapter/10.1007/978-981-19-3679-1_64
An Integrated Approach Towards Stock Price Prediction using LSTM Algorithm	https://ieeexplore.ieee.org/document/9936082
Black Box Models for eXplainable Artificial Intelligence	https://link.springer.com/book/10.1007/978-3-031-12807-3

Comparison of Machine Learning Algorithms for Hate and Offensive Speech Detection	https://link.springer.com/chapter/10.1007/978-981-16-9605-3_61
An Integrated Number Plate Recognition System through images using Threshold-based methods and KNN	https://ieeexplore.ieee.org/document/9765218
Computer Vision	https://www.degruyter.com/document/isbn/9783110756722/html?lang=en
EVOLUTION AND APPLICATIONS OF QUANTUM COMPUTING	https://scrivenerpublishing.com/cart/title.php?id=793
Image Caption Generation Using Attention Model	https://link.springer.com/chapter/10.1007/978-981-16-7167-8_74