Intelligent Home Surveillance System using Convolution Neural Network Algorithms

Publisher: IEEE

Cite This

PDF

R. Sathya ; V.C. Bharathi ; S. Ananthi ; K. Vaidehi ; S. Sangeetha **All Authors**

Abstract:

The creation of an automated security system aims to protect residences and workplaces by automating visitor entrance and enabling more flexibility in visitor record maintenance. Among all biometric authentications, face recognition is very secure because of unique facial features. There are two phases in authentication, face mask detection and face recognition. In first phase, Grassmann algorithm is used for face mask detection. If any

A Machine Learning and Deep Learning based Approach to Generate a Speech Emotion Recognition System

February 2024

DOI:10.23919/INDIACom61295.2024.10498783

Conference: 2024 11th International Conference on Computing for Sustainable Global Development (INDIACom)

Authors:

Sumera Ubaid
Stanley College of Engineering and Tech…

Dr.K. Vaidehi
Stanley College of Engineering and Tech…

Qamar Nisha

References (26)

A Machine Learning and Deep Learning based Approach to Generate a Speech Emotion Recognition System

Publisher: IEEE

Cite This

PDF

Sumera ; K. Vaidehi ; Qamar Nisha **All Authors**

Abstract:
The most common and general medium via which we humans convey or communicate our thoughts, emotions, feelings or ideas artlessly is by speech or articulation. Blending of this artless way of speech with the technological advancements of AI, has given rise to the importance of building emotion recognition systems from speech today. Even more, the speech/articulation emotion recognition system presented here is also to contribute in and facilitate various emerging applications of today like, in detecting persons' physiological state (as in lie detectors), also be used in forensics, medicine. The proposed work identifies/associates an appropriate label/emotion for the respective emotion from speech presented in the form of an audio file (.wav format). About 4240 audio samples are taken. 1440, 2800 samples from RAVDESS and TESS datasets are

AIP Publishing AIP Conference Proceedings

Volume 3007, Issue 1
20 February 2024

14TH INTERNATIONAL CONFERENCE ON MATERIALS PROCESSING AND CHARACTERIZATION 2023
24–26 March 2023

RESEARCH ARTICLE | FEBRUARY 20 2024

Emotion recognition using multi-modal features and CNN classification

Saba Noor Ayesha Khanum; Upendra Kumar Mummadi; Fahmina Taranum; Syed Shabbeer Ahmad; Imtiyaz Khan; D. Shravani

+ Author & Article Information

AIP Conf. Proc. 3007, 030001 (2024)
https://doi.org/10.1063/5.0192751

An emerging use of artificial intelligence is automatic emotion recognition. Facial expression identification is an intriguing and challenging problem in computer vision. In data science, one of the most difficult problems is speech emotion recognition. The technology that has been built consists of two stages: the first involves real-time facial and speech capture and the second is categorizing of emotions. Data collection, data analysis, and data visualization are the stages of automated emotion identification. Convolution neural networks are used in the proposed multimodal system to identify

AIP Publishing AIP Conference Proceedings

Volume 3007, Issue 1
20 February 2024

14TH INTERNATIONAL CONFERENCE ON MATERIALS PROCESSING AND CHARACTERIZATION 2023
24–26 March 2023
Hyderabad, India

RESEARCH ARTICLE | FEBRUARY 20 2024

Phishing website detection using ensemble learning models

Needa Iffath; Upendra Kumar Mummadi; Fahmina Taranum; Syed Shabbeer Ahmad; Imtiyaz Khan; D. Shravani

+ Author & Article Information

AIP Conf. Proc. 3007, 090001 (2024)
https://doi.org/10.1063/5.0192754

Share Tools

A malicious website, often known as a malicious URL, is a platform considering hosting unwanted content including spam, harmful advertisements, and dangerous websites. It is crucial towards quickly identify dangerous URLs. Blacklisting, regular expression, & signature matching techniques have all been employed in earlier investigations. These methods are utterly useless considering identifying new URLs, malicious URL variants, or URLs that have never been seen before. Machine learning-based solution that has been suggested can help towards solve this problem. Considering this kind about solution, in-depth study about feature engineering & feature representation about security artifact types, such as URLs, is necessary. Additionally, resources considering feature engineering & feature representation must be continuously improved towards support variations

Digital Twins in Healthcare: Addressing Concerns and Meeting Professional Needs

Christina Joseph Jyothula, Kishor Kumar Reddy C., Thandiwe Sithole

Source Title: Exploring the Advancements and Future Directions of Digital Twins in Healthcare 6.0
Copyright: © 2024 | Pages: 21
DOI: 10.4018/979-8-3693-5893-1.ch003

Abstract

Digital twin is the virtual representation of a physical system that processes information from its physical counterpart's environment, used to predict, simulate, and validate the physical system's future behaviour. Digital twin system, being an emergent technology, has seen implementations in a wide array of industries such as smart cities, engineering, etc. In healthcare, the digital twin technology shows great promise to improve various areas such as patient care, virtualization of hospital spaces, etc. There are concerns regarding patient data confidentiality, patient safety, accuracy and reliability, avoidance of bias, etc. These concerns can be combated only through thorough feedback from system experts, i.e., healthcare professionals. This chapter aims to provide valuable insights into the different needs of healthcare professionals while implementing digital twin systems in aiding diagnosis, treatment planning, patient monitoring, and collaboration among different specialty teams all while dealing with concerns regarding patient data security and sampling bias.

Chapter Preview

Top

1. Introduction

In 2019, B.R. Barricelli et al. compiled the a set of definitions of Digital Twins, A physical machine or virtual model that replicates, mimics, mirrors, or "twins" the life of a physical thing is called a digital twin. Out of the starting set of 75 papers that the literature survey included, the four main application domains were:

Revolutionizing Healthcare: A Marketing Approach to Digital Twin Technology

Areesha Fatima, Kishor Kumar Reddy C., Thandiwe Sithole

Source Title: Exploring the Advancements and Future Directions of Digital Twins in Healthcare 6.0
Copyright: © 2024 | Pages: 18
DOI: 10.4018/979-8-3693-5893-1.ch007

Abstract

Digital twin technology has emerged as a transformative force for healthcare in an age marked by technological progress. Various marketing strategies aimed at bringing digital twin technologies to the healthcare sector are explored in this chapter. Digital twins is a virtual model of a physical real-world product. Digital twins offer a revolutionary approach to the delivery of healthcare, enabling personalized treatment, predictive analysis, and remote monitoring. By analyzing market dynamics, defining target audiences, and creating value propositions, healthcare organizations can effectively support the benefits of digital twining. The research provides concrete steps to promote the effective use of digital twin technologies. The strategies for content marketing, social media engagement, and SEO alongside the importance of email marketing campaigns are highlighted. In addition, the importance of consumer success stories, regulatory compliance, and data-based measurements to ensure that marketing efforts are successful is emphasized.

Chapter Preview

Top

1. Introduction

Among the many technologies brought forth by Industry 4.0, One of the most popular technologies is digital twin technology. It was a concept introduced for manufacturing and has now been receiving attention in a wider range of domains. Digital Twin Technology refers to the technology that allows us to represent a physical object or model from the real world to the virtual world. A digital twin is connected to its physical counterpart through sensors, actuators, and other

Revolutionizing Malaria Prediction Using Digital Twins and Advanced Gradient Boosting Techniques

Lasya Vedula, Kishor Kumar Reddy C., Ashritha Pilly, Srinath Doss

Source Title: Exploring the Advancements and Future Directions of Digital Twins in Healthcare 6.0

 | Pages: 18

DOI: 10.4018/979-8-3693-5893-1.ch013

Abstract

A persistent global health concern is malaria, a potentially fatal illness caused by Plasmodium parasites spread by Anopheles mosquitoes. The most severe instances are caused by Plasmodium falciparum, with common symptoms including fever, chills, headaches, and exhaustion. Machine learning has proven effective for forecasting malaria epidemics, particularly with sophisticated methods like gradient boosting. This study investigates the algorithm's effectiveness in predicting malaria prevalence using numerical datasets. The gradient boosting algorithm can reliably examine variables, including location, climate, and past incidence rates. With the use of numerical datasets, the gradient boosting technique produces remarkable results in 98.8% accuracy, 0.012 mean absolute error, and 0.10 root mean squared error for predicting the incidence of malaria. Gradient boosting demonstrates potential in tackling the worldwide health issue of malaria, confirming its accuracy and practical applicability for prompt epidemic responses.

Chapter Preview

Top

1. Introduction

The development of digital twins driven by sophisticated gradient boosting methods presents a glimpse of hope in the never-ending fight against malaria. Our method of anticipating and controlling malaria epidemics has changed dramatically as a result of these cutting-edge tools, which are powered by advanced machine learning algorithms. Through the creation of virtual versions of actual situations, digital twins provide proactive approaches to epidemic response and

Explicit Monitoring and Prediction of Hailstorms With XGBoost Classifier for Sustainability

Peryala Abhinaya, C. Kishor Kumar Reddy, Abhishek Ranjan, Ozen Ozer

Source Title: AI and IoT for Proactive Disaster Management
Copyright: © 2024 | Pages: 26
DOI: 10.4018/979-8-3693-3896-4.ch006

Abstract

Hailstorms are extremely dangerous for both people and property, hence precise forecasting techniques are required. To increase hailstorm forecast accuracy, this study suggests utilizing the XGBoost algorithm. The gradient boosting technique XGBoost is well-known for its effectiveness at managing intricate datasets and nonlinear relationships. The suggested approach improves prediction abilities by incorporating many meteorological factors and historical hailstorm data. The model outperforms conventional approaches through thorough evaluation utilizing cross-validation techniques. XGBoost, or extreme gradient boosting, is an excellent technique for hailstorm prediction because of its scalability, robustness, and proficiency with complicated datasets. By using the XGBoost algorithm, there is a chance to increase the accuracy of hailstorm predictions and decrease the socio-economic effects of these occurrences. To increase forecasting accuracy and mitigation tactics, this work demonstrates advances in hailstorm prediction using numerical weather models and machine learning approaches.

Chapter Preview

Top

Introduction

Large, destructive hailstones that occur during thunderstorms are what define hailstorms as natural phenomena. These icy missiles, which can range in size from tiny pellets to balls the size of a golf ball, can seriously damage infrastructure, towns, and agriculture. Since it enables prompt warnings and preparedness,

Nowcasting Various Forms of Precipitation Using Improvised Random Forest Classifier

Ashritha Pilly, C. Kishor Kumar Reddy

Source Title: Advanced Geospatial Practices in Natural Environment Resource Management
Copyright: © 2024 | Pages: 22
DOI: 10.4018/979-8-3693-1396-1.ch005

Abstract

Weather forecasting is the utilization of science and technology to foresee the conditions of the atmosphere for a given location and time. Weather forecasting is high priority since it helps to settle future climate changes and provides information on critical weather conditions. As the weather has a great impact on various aspects of human life, aquatic life, aviation industry, and others, efforts have been made for decades to improve the efficiency of weather forecasting to ensure a better life and to reduce economic loss, but the result is not more precise than expected. The present research focuses on improving the efficiency of weather forecasting, focusing on various forms of precipitation such as rain, snow, hailstorms, and snowflakes by making use of historical numerical weather datasets across the globe. The efficiency in terms of performance measures has been compared with existing models.

Chapter Preview

Top

1. Introduction

Objectives:

Research Problem: Analyzing on Nowcasting various forms of Precipitation using different Methods.

Significance: Helps to determine future climate changes.

Objectives: This research aims to achieve maximum percentage of performance measures and to find best model to predict the weather .

Dactylology Prediction Using Convolution Neural Networks

C. Kishor Kumar Reddy, Sahithi Reddy Pullannagari, Srinath Doss, P. R. Anisha

Source Title: Fostering Cross-Industry Sustainability With Intelligent Technologies
Copyright: © 2024 | Pages: 12
DOI: 10.4018/979-8-3693-1638-2.ch004

Abstract

Dactylology is a technique used by individuals who are deaf or heard of hearing to communicate by making signs with their fingers, particularly in manual alphabets. The goal of this project is to create a functional, real-time American Sign Language (ASL) recognition system using vision-based methods through finger spelling gestures and provide real-time text or speech outputs for individuals who are deaf and mute. A convolution neural network (CNN) algorithm has been employed. A major benefit of CNNs is their ability to perform image classification with minimal pre-processing when compared to other algorithms. Unlike other approaches that use manually designed filters, CNNs learn these filters automatically through training. By properly displaying the ASL symbols and ensuring adequate lighting without background noise, the system was able to detect nearly all of the symbols accurately. The proposed methodology achieved an accuracy of 94.8% for the 26 letters of the alphabet.

Chapter Preview

Top

1. Introduction

Dactylology communication is a visual-spatial language used by hard of hearing and deaf individuals to impart. Since various gesture-based communications are used in various nations and locales, it's anything but a general language. For instance, Spanish sign language in used in Spain, BSL in the United Kingdom, and Auslan is used in Australia. In this paper, we aimed to foster a framework that can consequently decipher communication through signing and give text or

A Study and Analysis on Diagnosis of Melanoma Cancer With Deep Learning: A Case Study

P. Yashashwini Reddy, C. Kishor Kumar Reddy, Natassia Thandiwe Sithole

Source Title: Federated Learning and AI for Healthcare 5.0
Copyright: © 2024 | Pages: 16
DOI: 10.4018/979-8-3693-1082-3.ch011

Abstract

The riskiest type of skin cancer is known as melanoma cancer, with more than millions of human populations identifying with this type in the last two decades around the world. Swift spreading nature to other areas of the body makes this type of cancer the most hazardous cancer among all other skin cancers. It can be reversed if identified at its primary stage, else chances of survival would be less if it is identified in its severe stage. There are several conventional methods to identify melanoma at primary stage performed by skin doctors, but there are a few limitations. To overcome the setbacks of conventional methods, artificial intelligence has been introduced to detect melanoma cancer. The application of concepts of artificial intelligence (AI) made a good enhancement in the field of medicine. A deep learning algorithm termed CNN is highly opted in melanoma detection as it shows appropriate outcomes.

Chapter Preview

Top

1. Introduction

An Efficient Early Diagnosis and Healthcare Monitoring System for Mental Disorders Using Machine Learning

View Sample PDF

Author(s): C. Kishor Kumar Reddy (Stanley College of Engineering and Technology for Women, India)
Copyright: 2023
Pages: 22
Source title: Sustainable Science and Intelligent Technologies for Societal Development
Source Author(s)/Editor(s): Brojo Kishore Mishra (NIST Institute of Science and Technology (Autonomous), India & Saveetha College of Liberal Arts and Sciences, SIMATS, Chennai, India)
DOI: 10.4018/979-8-3693-1186-8.ch002
Keywords: Engineering Science Reference / Environment & Agriculture / Sustainability / Sustainable Development

Abstract

Recently, the increase in internal health problems in society has led to an increase in research on the development of mechanistic capacity models to detect or predict internal mental health. The effective use of internal health assessments or discovery models allows internal health interpreters to redefine internal suffering more objectively than ever before, and in the early stages when interventions may be more effective. In this chapter, the authors aim to apply a bias mitigation system based on multitasking literacy to perform a fairness analysis and to fear the predicted model using the Reddit dataset. This chapter employs an efficient technique for machine learning random forests. The proposed model was evaluated against various performance metrics and the model showed 91.00% accuracy. This is an advantage compared to existing approaches.

Explicit Monitoring and Prediction of Hailstorms With XGBoost Classifier for Sustainability

Peryala Abhinaya, C. Kishor Kumar Reddy, Abhishek Ranjan, Ozen Ozer

Source Title: AI and IoT for Proactive Disaster Management
Copyright: © 2024 | Pages: 26
DOI: 10.4018/979-8-3693-3896-4.ch006

Abstract

Hailstorms are extremely dangerous for both people and property, hence precise forecasting techniques are required. To increase hailstorm forecast accuracy, this study suggests utilizing the XGBoost algorithm. The gradient boosting technique XGBoost is well-known for its effectiveness at managing intricate datasets and nonlinear relationships. The suggested approach improves prediction abilities by incorporating many meteorological factors and historical hailstorm data. The model outperforms conventional approaches through thorough evaluation utilizing cross-validation techniques. XGBoost, or extreme gradient boosting, is an excellent technique for hailstorm prediction because of its scalability, robustness, and proficiency with complicated datasets. By using the XGBoost algorithm, there is a chance to increase the accuracy of hailstorm predictions and decrease the socio-economic effects of these occurrences. To increase forecasting accuracy and mitigation tactics, this work demonstrates advances in hailstorm prediction using numerical weather models and machine learning approaches.

Chapter Preview

Top

Introduction

Large, destructive hailstones that occur during thunderstorms are what define hailstorms as natural phenomena. These icy missiles, which can range in size from tiny pellets to balls the size of a golf ball, can seriously damage infrastructure, towns, and agriculture. Since it enables prompt warnings and preparedness,

Nowcasting Various Forms of Precipitation Using Improvised Random Forest Classifier

Ashritha Pilly, C. Kishor Kumar Reddy

Source Title: Advanced Geospatial Practices in Natural Environment Resource Management
Copyright: © 2024 | Pages: 22
DOI: 10.4018/979-8-3693-1396-1.ch005

Abstract

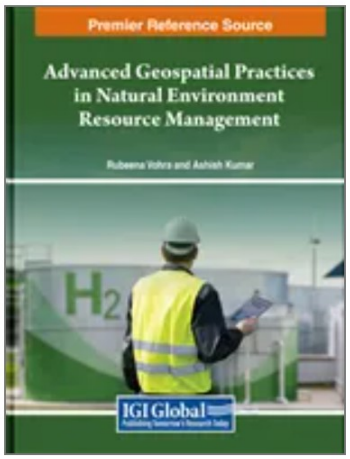
Weather forecasting is the utilization of science and technology to foresee the conditions of the atmosphere for a given location and time. Weather forecasting is high priority since it helps to settle future climate changes and provides information on critical weather conditions. As the weather has a great impact on various aspects of human life, aquatic life, aviation industry, and others, efforts have been made for decades to improve the efficiency of weather forecasting to ensure a better life and to reduce economic loss, but the result is not more precise than expected. The present research focuses on improving the efficiency of weather forecasting, focusing on various forms of precipitation such as rain, snow, hailstorms, and snowflakes by making use of historical numerical weather datasets across the globe. The efficiency in terms of performance measures has been compared with existing models.

Chapter Preview

Top

1. Introduction

Nowcasting Various Forms of Precipitation Using Improvised Random Forest Classifier



View Sample PDF

Author(s): Ashritha Pilly (Osmania, India)and C. Kishor Kumar Reddy (Stanley College of Engineering and Technology for Women, India)
Copyright: 2024
Pages: 22
Source title: Advanced Geospatial Practices in Natural Environment Resource Management
Source Author(s)/Editor(s): Rubeena Vohra (Bharati Vidyapeeth's College of Engineering, India)and Ashish Kumar (Bennett University, India)
DOI: 10.4018/979-8-3693-1396-1.ch005
Keywords: Engineering Science Reference / Environment & Agriculture / Geographic Information Systems / Natural Resource Management

Abstract

Weather forecasting is the utilization of science and technology to foresee the conditions of the atmosphere for a given location and time. Weather forecasting is high priority since it helps to settle future climate changes and provides information on critical weather conditions. As the weather has a great impact on various aspects of human life, aquatic life, aviation industry, and others, efforts have been made for decades to improve the efficiency of weather forecasting to ensure a better life and to reduce economic loss, but the result is not more precise than expected. The present research focuses on improving the efficiency of weather forecasting, focusing on various forms of precipitation such as rain, snow, hailstorms, and

The IRMA Community

Calls for Papers

Online Symposium

Newsletters

Research IRM

Click a keyword to search titles using our InfoSci-OnDemand powered search:

- Computer Science
- Electronic Commerce
- Business Management
- Public Administration
- Library Science
- Social Science
- Education
- Information Systems
- Environmental IS
- Multimedia IS

Dactylology Prediction Using Convolution Neural Networks

View Sample PDF

Author(s): C. Kishor Kumar Reddy (Stanley College of Engineering and Technology for Women, India), Sahithi Reddy Pullannagari (The University of Sydney, Australia), Srinath Doss (Botho University, South Africa)and P. R. Anisha (Stanley College of Engineering and Technology for Women, India)
Copyright: 2024
Pages: 12
Source title: Fostering Cross-Industry Sustainability With Intelligent Technologies
Source Author(s)/Editor(s): Brojo Kishore Mishra (NIST Institute of Science and Technology (Autonomous), India & Saveetha College of Liberal Arts and Sciences, SIMATS, Chennai, India)
DOI: 10.4018/979-8-3693-1638-2.ch004
Keywords: Engineering Science Reference / Environment & Agriculture / Sustainability / Sustainable Development

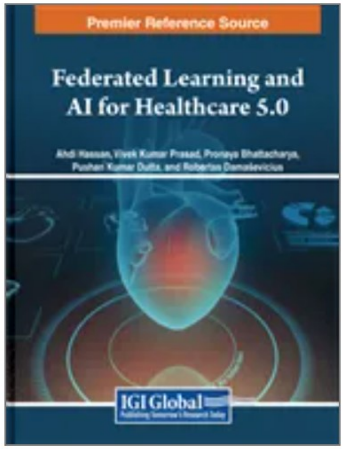
Purchase

View Dactylology Prediction Using Convolution Neural Networks on the publisher's website for pricing and purchasing information.

Abstract

Dactylology is a technique used by individuals who are deaf or heard of hearing to communicate by making signs with their fingers, particularly in manual alphabets. The goal of this project is to create a functional, real-time American Sign Language (ASL) recognition system using vision-based methods through finger spelling gestures and provide real-time text or speech outputs for individuals who are deaf and mute. A convolution neural network (CNN) algorithm has been employed. A major benefit of CNNs is their ability to perform image classification with minimal pre-processing when compared to other algorithms. Unlike other approaches that use manually designed filters, CNNs learn these filters automatically through

A Study and Analysis on Diagnosis of Melanoma Cancer With Deep Learning: A Case Study



Author(s): P. Yashashwini Reddy (Stanley College of Engineering and Technology for Women, India), C. Kishor Kumar Reddy (Stanley College of Engineering and Technology for Women, India)and Natassia Thandiwe Sithole (University of Johannesburg, South Africa)

Copyright: 2024
Pages: 16
Source title: Federated Learning and AI for Healthcare 5.0
Source Author(s)/Editor(s): Ahdi Hassan (Global Institute for Research Education and Scholarship, The Netherlands), Vivek Kumar Prasad (Nirma University, India), Pronaya Bhattacharya (Amity University, Kolkata, India), Pushan Dutta (Amity University Kolkata, India)and Robertas Damaševičius (Center of Real Time Computer Systems, Kaunas University of Technology, Lithuania)
DOI: 10.4018/979-8-3693-1082-3.ch011
Keywords: Artificial Intelligence / Computer Science & IT / Medical Information Science Reference / Medical Technologies

Abstract

The riskiest type of skin cancer is known as melanoma cancer, with more than millions of human populations identifying with this type in the last two decades around the world. Swift spreading nature to other areas of the body makes this type of cancer the most hazardous cancer among all other skin cancers. It can be reversed if identified at its primary stage, else chances of survival would be less if it is identified in its severe stage. There are several

Research Article

An Efficient Early Diagnosis and Healthcare Monitoring System for Mental Disorder using Machine learning Approach

C Kishor Kumar Reddy, Pullisani Satvika

https://doi.org/10.21203/rs.3.rs-2912222/v1

Abstract

Recently, the increase in internal health problems in society has led to an increase in research on the development of mechanistic capacity models to detect or predict internal mental health. The effective use of internal health assessments or discovery models allows internal health interpreters to redefine internal suffering more objectively than ever before, and in the early stages when interventions may be more effective.In this work, we aim to apply a bias mitigation system based on multitasking literacy to perform a fairness analysis and to fear the predicted model using the Reddit dataset. This article employs an efficient technique for machine learning random forests. The proposed model was evaluated against various performance metrics and the model showed 91.00% accuracy. This is an advantage compared to existing approaches.

Mental Health | Accuracy | Precision | Machine Learning | Deep Learning | Random forest

An Efficient Early Diagnosis and Healthcare Monitoring System for Mental Disorders Using Machine Learning

C. Kishor Kumar Reddy

Source Title: Sustainable Science and Intelligent Technologies for Societal Development
Copyright: © 2023 | Pages: 22
DOI: 10.4018/979-8-3693-1186-8.ch002

Abstract

Recently, the increase in internal health problems in society has led to an increase in research on the development of mechanistic capacity models to detect or predict internal mental health. The effective use of internal health assessments or discovery models allows internal health interpreters to redefine internal suffering more objectively than ever before, and in the early stages when interventions may be more effective. In this chapter, the authors aim to apply a bias mitigation system based on multitasking literacy to perform a fairness analysis and to fear the predicted model using the Reddit dataset. This chapter employs an efficient technique for machine learning random forests. The proposed model was evaluated against various performance metrics and the model showed 91.00% accuracy. This is an advantage compared to existing approaches.

Chapter Preview

Top

1. Introduction

The IRMA Community

Calls for Papers

Online Symposium

Newsletters

Research IRM

Click a keyword to search titles using our InfoSci-OnDemand powered search:

- Computer Science
- Electronic Commerce
- Business Management
- Public Administration
- Library Science
- Social Science
- Education
- Information Systems
- Environmental IS
- Multimedia IS

A Study of Machine Learning Methods-Based Affective Disorders Detection Using Multi-Class Classification

View Sample PDF

Author(s): Bhavya Tungana (Stanley College of Engineering and Technology for Women, India), Kishor Kumar Reddy C. (Stanley College of Engineering and Technology for Women, India), Marlia Mohd Hanafiah (Universiti Kebangsaan Malaysia, Malaysia)and Srinath Doss (Botho University, Botswana)

Copyright: 2023

Pages: 20

Source title: Intelligent Engineering Applications and Applied Sciences for Sustainability

Source Author(s)/Editor(s): Brojo Kishore Mishra (NIST Institute of Science and Technology (Autonomous), India & Saveetha College of Liberal Arts and Sciences, SIMATS, Chennai, India)

DOI: 10.4018/979-8-3693-0044-2.ch002

Keywords: Engineering Science Reference / Environment & Agriculture / Environmental Engineering / Sustainable Development

Purchase

View A Study of Machine Learning Methods-Based Affective Disorders Detection Using Multi-Class Classification on the publisher's website for pricing and purchasing information.

Abstract

Psychological health issues like stress, anxiety and depression is becoming general due to various factors. Different severity levels of stress, anxiety and depression have varied impacts on people, which can lead to suicidal ideation and suicide attempts. Demographic data consists of gender, age group, marital status, education, type of employment, economic status, and living status, and 21 questions about stress, anxiety, and depression, including scores, were considered for the dataset. The proposed K-nearest neighbor model achieved maximum accuracy with 94.5% for stress and anxiety and 97.7% for depression, compared with Naive

scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Digital+Twins+for+Heart+Classification+Theory%2C+Practices+and+Advancements+Using+Machine+Learning+&btnG=

Google Scholar

Digital Twins for Heart Classification Theory, Practices and Advancements Us

Articles

My profile My library

Any time
Since 2024
Since 2023
Since 2020
Custom range...

Sort by relevance
Sort by date

Any type
Review articles

include patents
include citations

Digital Twins for Heart Classification Theory: Practices and Advancements Using Machine Learning

MS Sree, OD Ojer

Exploring the Advancements and Future Directions of Digital Twins in ..., 2024 · igi-global.com

Abstract

The technique referred to as "digital twins" is becoming more widely used. This study uses keyword co-occurrence network (KCN) analysis to look at how digital twin research has evolved. The authors analyse data from 9639 peer-reviewed publications that were released in the years 2000–2023. Two distinct groups may be formed from the findings. In the first part, they look at how trends and the ways that terms are linked have changed over time. Concepts related to sense technology are linked to six different uses of the

SHOW MORE

Save Cite Cited by 2 Related articles

Showing the best result for this search. See all results

Search the web and Windows

03:29:55 PM

15:29
22-10-2024

Research Article

An Efficient Early Diagnosis and Healthcare Monitoring System for Mental Disorder using Machine learning Approach

C Kishor Kumar Reddy, Pullisani Satvika

https://doi.org/10.21203/rs.3.rs-2912222/v1

Abstract

Recently, the increase in internal health problems in society has led to an increase in research on the development of mechanistic capacity models to detect or predict internal mental health. The effective use of internal health assessments or discovery models allows internal health interpreters to redefine internal suffering more objectively than ever before, and in the early stages when interventions may be more effective.In this work, we aim to apply a bias mitigation system based on multitasking literacy to perform a fairness analysis and to fear the predicted model using the Reddit dataset. This article employs an efficient technique for machine learning random forests. The proposed model was evaluated against various performance metrics and the model showed 91.00% accuracy. This is an advantage compared to existing approaches.

Mental Health | Accuracy | Precision | Machine Learning | Deep Learning | Random forest

IIP Series

www.iipseries.org

Iterative International Publishers

Chikmagalur, Karnataka-577102, India
Paisley Circle, Novi, Michigan-48377, USA

ISO 9001:2015 certified, registered as Publisher with imprint IIP under Raja RamMohun Roy National Agency, Ministry of Education, Government of India and also under Bowker ISBN Agency, USA

Unit of Selfypage Developers Pvt Ltd

Certificate of Recognition

awarded to

Dr. Guntha Karthik

Ph.D.
Associate Professor
ECE Department Stanley College of Engineering and Technology for Women(Autonomous) Abids, Hyderabad."

in recognition of an outstanding contribution as an ***Editor*** *for the edited book titled*

Futuristic Trends inElectronics & Instrumentation EngineeringVolume 3 Book 2

E-ISBN:978-93-6252-452-2 Publication Date : 25-February-2024
Print-ISBN:978-93-6252-495-9 Publication Date : 30-April-2024

Nanjesh Bennur
Director, IIP Series

TOWARDS 6G: WIRELESS COMMUNICATION

Abstract

The Development of 5G Wireless system is continuously exposing the inherent limitations, in this situation 6G are expected to offer performance advanced to 5G. A survey on Wireless evolution towards beyond 5G (B5G) and 6G communication networks are discussed in this paper. Moreover, we outline the vision and challenges associated with 6G.

Keywords: 5G, Wireless system, 6G

Authors

Srilakshmi Ravali M.
Assistant Professor, Dept. of ECE,
Stanley College of Engineering &
Technology for Women,
Hyderabad, Telangana State, India,
srilakshmiravali@gmail.com

R. Ramya Shree
Assistant Professor
ECE Department,
Stanley College of Engineering &
Technology for Women
Hyderabad, Telangana State, India.
ramyashree@stanley.edu.in

I. INTRODUCTION

Wireless 5G communications era is being launched, with many integrated applications. However, 5G specs like latency, data rate, reliability meager the needs of upcoming technologies forcefully. To meet these challenging demands, studies are mainly looking on beyond 5G networks (B5G) called 6G technology empowering emerging new applications and different technologies. It is anticipated that the majority of the functionality found in 5G systems today would be kept and improved in 6G systems.

In the rest of paper, the vision and challenges of 6G described in section-II, Section III: ExploreEmerging technologies for 6G, Section IV gives a 6G services and use cases, V section about Issues for 6G, finally, we conclude this article in Section VI.

II. VISION AND CHALLENGES

1. **Vision:** 6G is going be one of key enabler to associate everything, gives broader coverage integrating all functions, that include detecting, caching, communicating, positioning, routing, imaging, computing, control, radar, a self-ruling environment with intelligence like humans and consciousness. It helps automatic systems which uses AI. The 6G technology helps information society which 5G technology cannot. 5G technology has to be updated to 6G. The 6G technology vision [1] can be summarized using four key concepts: "Intelligent Connectivity," "Deep Connectivity," "Holographic Connectivity," and "Ubiquitous Connectivity." Deep connectivity envisions profound sensing, deep learning, and deep cognition, including concepts like telepathy and mind-to-mind communication. Holographic connectivity involves holographic communication and high-fidelity Augmented/Virtual Reality (AR/VR) experiences with seamless coverage accessible anytime and anywhere. Ubiquitous Connectivity entails three-dimensional coverage and integration of Space-Air-Ground-Sea communication.

2. **Requirements and Challenges**:

Table1: Key capabilities and Network features of 6G

Characteristics	6G
Usage Scenarios	FeMBB ERLLC umMTC LDHMC and ELPC
Peak Data Rate	1TB/s
Experienced Data Rate	1 GB/s
Spectrum Efficiency	5–10x that of 5G
Network Energy Efficiency	10–100x that of 5G
Traffic Capacity	1 Gb/s/m^2
Connectivity Density	10^7 Devices/km^2
Mobility	1,000 km/h
Latency	10- 100 s

Engineering
University Park, State College
Pennsylvania, USA

Anindya Nag
Computer Science and Engineering Discipline
Khulna University
Khulna, Bangladesh

Arshi Naim
Department of Information Systems
King Khalid University
Abha, Saudi Arabia

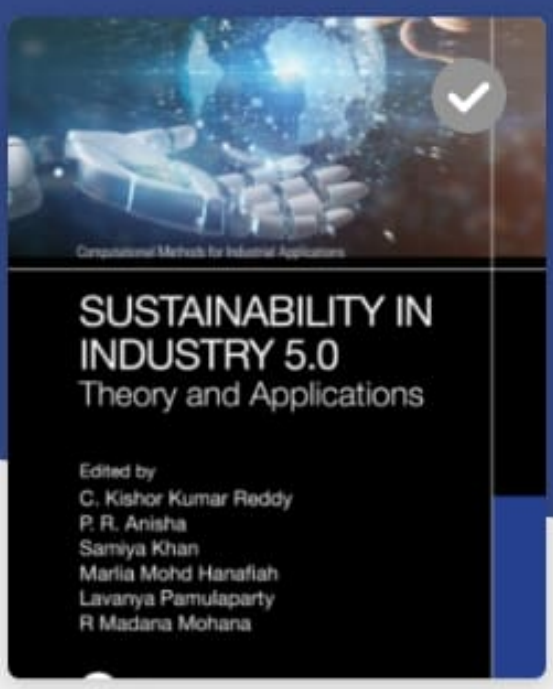
Sanjoy Kumar Pal
Department of Biological Sciences
Skyline University
Kano, Nigeria

Bandi Pallavi
Department of Electrical and Electronics Engineering
Stanley College of Engineering & Technology for Women
Hyderabad, India

Alipsa Pattnaik
Birla School of Applied Sciences
Birla Global University
Bhubaneswar, India

Aryan Pattnaik
Department of Computer Science &

Sustainability in Industry 5.0



Title
Sustainability in Industry 5.0

Publisher
CRC Press

Format
EPUB

Published
2024-02-19

VBID
9781003845195

Book URL
nullbooks/9781003845195

Check for Book Updates

Remove From Device

Transfer Learning Based Bi-GRU for Intrusion Detection System in Cloud Computing

Conference paper | First Online: 24 May 2024
pp 1–15 | Cite this conference paper

Gavini Sreelatha

Part of the book series: Communications in Computer and Information Science ((CCIS,volume 2121))

Included in the following conference series:
International Conference on Intelligent Computing for Sustainable Development

Abstract

Information security is significantly impacted by intrusion detection systems (IDS), which are considered as a critical security concern in the field of cloud computing (CC). In this study, deep feature guided optimized bidirectional Gated Recurrent Unit (Bi-GRU) neural network based transfer learning (TL) technique is proposed for enhancing cloud security. Initially, the min-max normalization process is performed on input traffic data. Further, the pre-trained-residual neural networks (ResNet) is employed as a deep feature extractor to convert the normalized high dimensional traffic data into low dimensional high sensitive data. Finally, the deep learning (DL) model, Bi-GRU neural network based TL with an artificial hummingbird algorithm (AHO) based bio-inspired algorithm is used to recognize the attack classes. The hyper parameter tuning of Bi-GRU is achieved by AHO based optimization process. The proposed model will be calculated based on some evaluation metrics for UNSW-NB15 dataset, and NSL-KDD dataset. The metrics such as accuracy, recall, false alarm rate (FAR) and precision are the performance measured for proposed method and its efficacy is analysed to describe the superiority. Finally, the attacks found in the cloud are correctly classified with accuracy of 0.992 on NSL-KDD dataset.

Stock Market Price Prediction Using Sentiment Analysis

Conference paper | First Online: 23 April 2024
pp 261–268 | Cite this conference paper

J. Sasi Kiran, P. Dhana Lakshmi, Naheed Sultana, G. Naga Rama Devi, Suwarna Gothane & K. Reddy Madhavi

Part of the book series: Lecture Notes in Electrical Engineering ((LNEE,volume 1155))

Included in the following conference series:
International Conference on Microelectronics, Electromagnetics and Telecommunication

Abstract

The domain of stock market price forecasting has experienced a significant transformation with the integration of sentiment analysis methods. This study explores the application of the XGBoost algorithm, a robust gradient boosting technique, in the context of stock price prediction enhanced by sentiment analysis. The research leverages historical stock market data and sentiment data from diverse textual sources, including news articles, social media, and financial reports. It encompasses data preprocessing, sentiment analysis, and the integration of sentiment scores with stock data, which serves as the feature set for the XGBoost model. Hyperparameter tuning and cross-validation are used to enhance the model's performance with rigorous evaluation metrics providing insight into its predictive accuracy. The XGBoost algorithm, known for its versatility and predictive power, is revealed as a potent tool in forecasting stock prices, offering the potential for more informed investment decisions. This study serves as an exploration of the fusion between cutting-edge machine learning and the financial world, shedding light on the evolving landscape of stock market price prediction and the substantial role of sentiment analysis coupled with XGBoost in enhancing prediction accuracy.

Protecting the Privacy of IoMT-Based Health Records Using Blockchain Technology

Conference paper | First Online: 29 November 2023

pp 409–423 | Cite this conference paper

T. C. Swetha Priya & R. Sridevi

Part of the book series: Lecture Notes in Networks and Systems ((LNNS,volume 738))

Included in the following conference series:
International Conference on Network Security and Blockchain Technology

Abstract

Internet of medical things (IoMT) has become one of the revolutionary technology nowadays due to wide spread use of IoT in healthcare applications. IoMT improves the human–machine interaction enhancing the instantaneous monitoring of patient's health and also involves patients in making decisions. So, the current medical devices have to be transformed into IoMT-based medical devices to collect patient information instantaneously. The patient's health-related information can be observed from remote location without any need to go to hospital, and this data can be processed and is sent to mediators for further use. So, we are in need of technology that secures the confidentiality of the health information of patients. Blockchain is one such technology that helps in securing privacy of patient's health-related data. Blockchain technique uses a sequence of blocks comprising the block ID, previous block ID, and the transactions. The preceding block ID can be used to maintain a link between subsequent blocks. These links continue until the first block is reached. This ID contains hash in blocks, and this hash is appended to subsequent blocks in chain. Any modifications to the patient information in a block will change the subsequent blocks in the chain also. So, changes to the data made by a hacker will become impossible. It uses public key cryptography for performing transactions between nodes. So, use of such type of cryptographic hash technique and chain formation for the blocks guarantees the security and privacy of the patient's health information or records.

Dr. G. Padmasree has done her M.Sc. and M.Phil. from University of Hyderabad received her doctoral degree from Osmania University. She has 25 years of teac experience and is currently working as Head & Professor in Department of Phy Stanley College of Engineering and Technology for Women (Autonomous), Hyder Telangana. She worked in various positions as BOS Chairperson, Member of Acad Council & IIC council etc. She is life member of ISTE and IAPT. She has written 3 chapters, published 5 patents and has 15 SCI Journal papers to her credit. She presented several papers in International and National Conferences and also rec Best oral presentation award. She had received a project from UGC DAE CSR period of three years. Her area of specialization is Materials Science.

Dr. D. Lakshmi is working as Lecturer in Physics in the Department of Physics Government Degree College (Autonomous), Tuni, Andhrapradesh. As an acader with 23 years of teaching experience. She had presented several research pap national and international conferences as well as journals. She received her UG B.Sc (Electronics) from Andhra University - Visakhapatnam in 1996, Andhrapade Degree M.Sc (Electronics) from university of Hyderabad, Hyderabad in 19 Pursued her PhD from Andhra University Visakhapatnam, AP in the 2019 Respec Her research interests include Ultra sonic studies, Multiferroic Materials etc.

Dr. Kodumuri Veerabhadra Rao is currently working as an Associate Professo Department of Physics in Methodist college of Engineering and Technology. He his Ph.D degree in the field of materials science. He received his Master's d Applied Electronics under Osmania university. He is having 25 years of experience. He has almost ten years of experience as a controller of examinati research area is glasses preparation by melt quenching technique. He has p more than 10 papers in peer-reviewed journals, 3 book and 1 book chapter to h He has attended national workshops and symposiums and published papers ir national/ International Journals.

Dr. A. Arun kumar is working as an Associate Professor in the Department of P Methodist college of Engineering and Technology. He has 14 years of experience and 9 years of Teaching Experience in the Engineering colleges received Ph.D. Degree from Anna University, Chennai, India in 2015. His area of is Materials science. He has published 41 peer-reviewed international pub edited 5 books, and 4 Book chapters to his credit. He is a life member Association for Crystal Growth, ISTE and International Organization for Acad Scientific Development (IOASD). He is acting as an editor in Edwin Group of Jo Is serving as reviewer in many international journals. He has delivered Guest L Engineering, Arts & Science colleges. He received International Travel Support SERB, IUCR, and presented his findings at the 17th International Conference Growth and Epitaxy (ICCGE-17), August 11-16, 2013, Warsaw, Poland. He rec "Best Researcher Awards" in 2012 and 2013 from SSN Institutions. He recei "Best oral/poster awards" in International/National conferences.

ISBN 978-81-972352-8-0

BookDeal

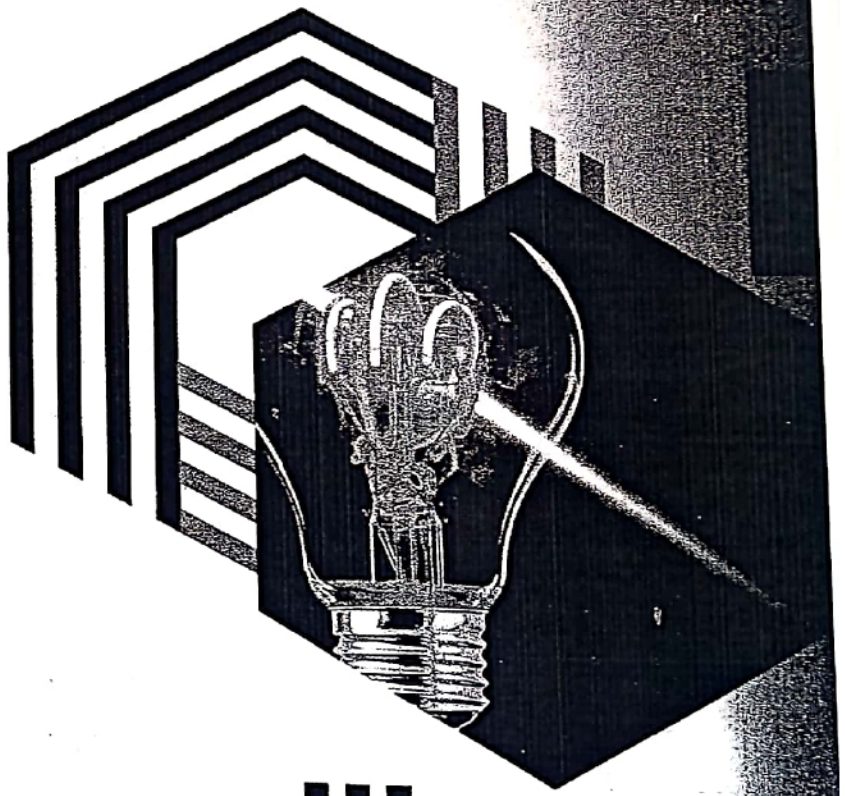
amazonbooks

Contact for Copies:
Techno Publishers, Chennai
Ph: 9025093516
technopublishersmail@gmail.com
www.technopublishers.com

Price Rs. 369/-

First Edition

ENGINEERING PHYSICS



Dr. G. Padmasree
Dr. D. Lakshmi
Dr. Kodumuri Veerabhadra Ra
Dr. A. Arun kumar

TECHNO PUBLISHERS

TECHNO PUBLISHERS

Techno Publishers

[Registered under Government of India]

www.technopublishers.com

technopublishersmail@gmail.com

Certificate No: 628001

CERTIFICATE OF PUBLICATION

The Editorial Board and Governing Council of Techno Publishers is hereby awarding this Certificate to honour the author

Dr. G. Padmasree

Head & Professor in Physics, Stanley College of Engineering and Technology for Women, Hyderabad

in recognition of publishing the book titled

"Engineering Physics"

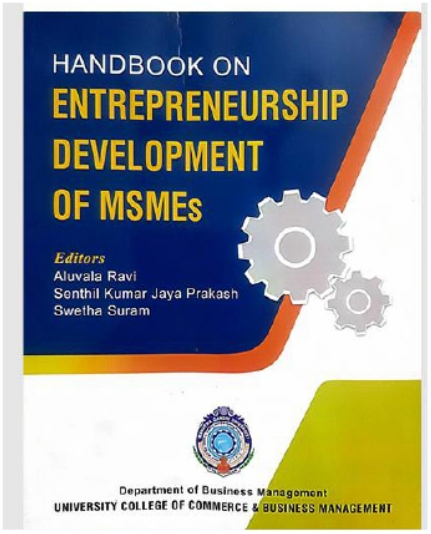
which is published on 24.06.2024 by Government of India with the assigned International Standard Book Number (ISBN : 978-81-972362-8-0)

ISBN

REVEIWER
TECHNO PUBLISHERS

TECHNO PUBLISHERS Verified CHENNAI

EDITOR- IN -CHIEF
TECHNO PUBLISHERS



17

ROLE OF MSMEs IN ENTREPRENEURSHIP AND ECONOMY DEVELOPMENT IN INDIA

Dr. G. Nalini
Associate Professor,
Stanley College of Engineering and Technology for Women.
Email: drnalinijeval@gmail.com

Abstract

Small and medium-sized enterprises (SMEs) contribute significantly to the growth of economy and in creating entrepreneurship. Ministerial MSMEs and its organizations are supporting the States in their efforts to promote entrepreneurship and employment, as well as strengthen the competitiveness of MSMEs in the changing economic environment. For a developing country like India, micro, small, and medium-sized enterprises (MSMEs) play a more significant role in entrepreneurship. MSMEs are an essential sector for the Indian Economy and have contributed immensely to their socio-economic growth & development. The aim of the chapter to understand the role of MSMEs in creating Entrepreneurship and to focus on identifying the role of MSMEs in Economy development in India. This chapter covers the importance of MSMEs, MSMEs schemes for entrepreneurship development, entrepreneurship and skill Development programs and trends in MSMEs growth. This chapter also covers the role of MSMEs in growth of Indian economy

Keywords: MSMEs, Entrepreneurship, Economy.

Role of MSMEs in Entrepreneurship and Economy Development in India

Chapter Objectives

- To understand the overview of MSMEs in India
- To recognize the role of MSMEs in Entrepreneurship development
- To understand the role of MSMEs in Economy development in India