# **2023 International Conference** on Advanced Computing & **Communication Technologies** (ICACCTech 2023)

Banur, India 23 – 24 December 2023



**IEEE Catalog Number: CFP23UN0-POD ISBN**:

979-8-3503-8089-7

## Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

 IEEE Catalog Number:
 CFP23UN0-POD

 ISBN (Print-On-Demand):
 979-8-3503-8089-7

 ISBN (Online):
 979-8-3503-8088-0

### Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400

Fax: (845) 758-2633

E-mail: curran@proceedings.com Web: www.proceedings.com



# 2023 International Conference on Advanced Computing & Communication Technologies (ICACCTech) ICACCTech 2023

## **Table of Contents**

Message from the General Chair  Message from the Program Chair  Organizing Committee  Message from the Conference Secretary  Program Committee  Reviewers	
Session: Artificial Intelligence: Applications, Review	
Quantum Teleportation Using Artificial Wormhole: A Mini Review Piyush Tailor (Chandigarh University, India), Harshita Singh (Chandigarh University, India), and Ruby Priya (Chandigarh University, India)	1
Artificial Intelligence for Portfolio Selection: A Bibliometric Review	9
Artificial Intelligence in Health Insurance: A Bibliometric Review	14
Face Reconstruction from Sketch using Deep Learning	19

A Comprehensive Investigation into the Dimensions of Educational Data Mining Using Artificial Intelligence
Kajal Mahawar (Lovely Professional University, India) and Punam Rattan (Lovely Professional University, India)
Human-Computer Interaction: A Systematic Review
Possibilities and Pitfalls of Generative Pre-Trained Transformers in Healthcare
Identification of Biomarker for Autism Spectrum Disorder using EEG: A Review
Unveiling the Art of Software Testing Effort Estimation: An In-Depth Study of Current Techniques and Their Analysis
Advancements in Natural Language Processing: Techniques and Applications
Session: Digital security, Information Privacy and Web Technology
Role of AI for Fraud Detection in Banks: A Bibliometric Analysis
A Design of an Intergrated Intrusion Detection System on Cloud using DNN
Evidence-Aware Fake News Detection: A Review
Digital Identity: An Attempt to Sustain the Refugees

Message Authentication Approaches in Vanets
Securing Mobile Robots Multi-Party Authentication Technique Using Modified Elliptic Curve Cryptography
From Strings to Secrets: Modernizing Password Management for Enhanced Security
Session: Diverse Applications and Innovations in AI and ML: From Analytics to Human-Computer Interaction
Predicting Medal Counts in Olympics using Machine Learning Algorithms: A Comparative Analysis
ImmerseHub: Realistic Interaction Adventure Game
AuroraSync SAHVI: Enabling Virtual Interaction with Hand Tracking and Voice Commands for Enhanced Human-Software Interaction
Human Activity Recognition from Sensor Data using Machine Learning
Dynamic Load Balancing Framework for Context Sensitive Offloading Scheme in Mobile Cloud Computing

Growing Trend of International Marketing Place for Matic based Smart Contracts
Impact of Demand and Supply in Decision Making for E-Commerce Application
Verification and Validation Techniques of Crypto-Currency Smart Contracts within Flutter
Apps
Comparative Analysis of Tree-Based Models and Deep Learning Architectures for Tabular  Data: Performance Disparities and Underlying Factors
Blockchain-Based Decentralised StorageSystem: DDrive
Web of Science-Based Bibliometric Analysis Blockchain-Based Authentication in a Cloud
Environment
Session: Health Care Analytics, Medical Technologies, and Data Analysis
Unraveling the Potential of Machine Learning in Lung Cancer Prediction
Review on Diabetes Detection using Machine Learning Approaches
Brain Tumour Segmentation and Classification using the Convolutional Neural Network (U-Net Model)

Emerging Role of Machine Learning in Field of Pharmacology	
AI (Random Forest) -Enhanced Alzheimer's Detection and Prediction	
Brain Computer Interface (BCI)-Inspired Arduino Based Wheel Chair Controller	
Diabetes Prediction using Ada Boost Algorithm	
Harnessing Linguistic Markers for Early Mental Health Detection via Social Media	
Revolutionizing Respiratory Health: Unveiling the Interplay Between Vitamin D and Asthmatic Complications through Advanced AI Insights	
Early Prediction of Coronary Artery Disease Using Data Mining Techniques	
A Review of Artificial Intelligence-Based Techniques in the Diagnosis of Chronic Obstructive Pulmonary Disease	
Disease Detection in Bombyx Mori Silkworm using Deep Learning Algorithm CNN	
WoS Driven Bibliometric Analysis on Genetic Disease Prediction using Artificial Intelligence	

# Session: Innovative Technologies: From Green Computing to Social Dynamics

A Survey on Green IoT and Its Opportunities for Future Directions Sachin Upadhye (Shri Ramdeobaba College of Engineering and Management, India), Nilesh Shelke (Symbiosis Institute of Technology, Nagpur Campus, India), and Uma Patel Thakur (Jhulelal Institute of Technology, India)	. 329
The Impact of Modern Technologies and HR Practices on Employee Retention: A Study on Apparel Firms in India	. 335
Demonstrating the Impact of Financial Difficulties on Mental Stress	. 341
Exploring the Performance and Power Efficiency of FPGA-Based Tic- Tac-Toe on Spartan3 FPC Image Processing Kit	
The Role of Technology in Assisting Refugees: A Technological Lifeline for Hope and Resilience	352
Designing and Developing a CanSat for Environmental Monitoring and Scientific Exploration Harsh Sharma (Chandigarh University, India), Abhinav Sehgal (Chandigarh Group of Colleges, India), Harsh Jindal (Chandigarh University, India), Aditi Dutta (Chandigarh Group of Colleges, India), and Bhawna Sharma (Chandigarh Group of Colleges, India)	358
Guruhub: An Innovative Paradigm for Enhancing Student-Teacher Interactions and Incentivizing Educational Excellence	364
Database Management Systems: A Study of the Increasing Impact of NoSQL Databases	. 370
Session: Internet of Everything and Sensor Networks	
AI based Fish Farm Management System using Internet of under Water Things (IoUT)	375
Intelligent Hybrid Model for Energy-Efficiency on WBAN	380

Ruchi Ruchi (C University, Ind	Control System for Monitoring Agricul Phandigarh University, India), Vikas Wasso ia), Muskan Muskan (Chandigarh Univers handigarh University, India)	n (Chandigarh	385
Piyush Piyush ( University, Ind Himanshu Sing	enance for Industrial Equipments Using (Chandigarh University, India), Ritik Kum ia), Nidhip Goomer (Chandigarh Universit th Rana (Chandigarh University, India), So niversity, India), and Ankit Singh (Chandi ia)	ar (Chandigarh y, India), mal Chhabra	391
S.M Najrul Hoo Barua (BGMEA Mesbahuddin S Kaiser (Jahangii	Monitoring and Humidity Controlling Swlader (Jahangirnagar University, Banglad A University of Fashion and Technology, Barker (Jahangirnagar University, Banglade Trnagar University, Bangladesh), and Md V University, Bangladesh)	desh), Biman angladesh), M. sh), M. Shamim	397
Optimization Divyansh Gupt. India), Samarth University, Ind University, Ind	or Placement for Air Quality Monitoring	e University, ld Peace IIT World Peace MIT World Peace	404
Session: Ma	chine Learning Techniques	and Applications	
Machine Learning Pranchal Rajpu University), At	chine Learning Techniques  g Play Role in Identification and Predict t (Division of Research and Innovation, Ut reyi Pramanik (Division of Research and In iiversity), and Shrinivas Aluvala (SR Unix	tion of Plant Diseasetaranchal	414
Machine Learning Pranchal Rajpu University), At Uttaranchal Un Unlocking the Po	g Play Role in Identification and Predict t (Division of Research and Innovation, Ut reyi Pramanik (Division of Research and In iversity), and Shrinivas Aluvala (SR Univ wer of Machine Learning: Antenna Des (Chandigarh University, India) and Ruch	tion of Plant Diseasetaranchal novation, persity) ign Optimization in the Digital Age	
Machine Learning Pranchal Rajpu University), At. Uttaranchal Un Unlocking the Por Lalhriatpuii Lal (Chandigarh Un Multi-Modality C Metrics	g Play Role in Identification and Predict t (Division of Research and Innovation, Ut reyi Pramanik (Division of Research and In iversity), and Shrinivas Aluvala (SR Univ wer of Machine Learning: Antenna Des (Chandigarh University, India) and Ruch	tion of Plant Disease	419 ation
Machine Learning Pranchal Rajpu University), At Uttaranchal Un Unlocking the Por Lalhriatpuii Lal (Chandigarh Un Multi-Modality C Metrics	g Play Role in Identification and Predict to (Division of Research and Innovation, Ut reyi Pramanik (Division of Research and Inversity), and Shrinivas Aluvala (SR Unit wer of Machine Learning: Antenna Destochandigarh University, India) and Ruch (Chandigarh University, India) and Ruch (Inversity, India) (Chandigarh University, India) (Chandigarh University, India) (Chandigarh University, India) (Chandigarh University), India) (Chandigarh University) (Chandig	tion of Plant Disease	419 ation 426

Nature-Inspired Algorithm based Image Encryption Methods: A Comprehensive R	_
Research Challenges	440
Rice Blight Disease Intensity Classification with CNN-SVM Fusion  Anuj Patyal (Department of Mathematics, Chandigarh University, India)  and Richa Sharma (Department of Mathematics, Chandigarh University, India)	444
AREF-Net: Bridging Residual, Efficient, and Attention-Based Architectures for Imag Classification	
Optimization and Comparative Analysis of Game Theory Algorithms used in Zero-457  Rimjhim Sinha (Dr. Vishwanath Karad MIT World, Peace University, India), Shivani Rajput (Dr. Vishwanath Karad MIT World, Peace University, India), Omkar Singh (Dr. Vishwanath Karad MIT World, Peace University, India), Saneet Saluja (Dr. Vishwanath Karad MIT World, Peace University, India), and Vitthal Gutte (Dr. Vishwanath Karad MIT World, Peace University, India)	Sum Games
A Comprehensive Investigation into the Implementation of Machine Learning Solu Network Traffic Classification	
Student Career Prediction using Machine Learning Manjit Singh (Chandigarh University, India), Srinibas Pattanaik (Chandigarh University, India), Gagandeep Singh (Chandigarh University, India), Pooja Luthra (Chandigarh University, India), Sanjay Singla (Chandigarh University, India), and Babita Sharma (Chandigarh University, India)	473
Session: Special Session on Computational Intelligence an Communication Technologies -CCICT	nd
Comparative Study of Classification Algorithms on Contrived News	478
Impact of Artificial Intelligence on Online Buying Behaviour in E-Commerce Rohit Bansal (Maharshi Dayanand University, India) and Tamanna Bansal (MDU-CPAS, Maharshi Dayanand University, India)	484
Understanding Big Data Applications in the Healthcare Industry	490

Handwriting Recognition System using YOLO and CTC	
Analysis of Influential Barriers in Plant Burgeoning using AHP Technique	
Exploration of Factors of Green Marketing	
Cirrhosis Disease Prediction using Machine Learning	
Brain Tumor Detection Using Convolutional Neural Network and Transfer Learning Approach  521  Manisha Tyagi (Department of Electronics and Communication  Engineering, Deenbandhu Chhotu Ram University of Science and  Technology\ India) and Priyanka Singh (Department of Electronics and  Communication Engineering, Deenbandhu Chhotu Ram University of Science  and Technology, India)	
Smart Electric Cars: Navigating the Intersection of Sustainable Innovation and Security  Threats	
Li-Fi Technology: Bridging the Digital Divide through Light	
AI and Data Science: Transforming Entrepreneurship in 21st Century	
Exploring 5G Architecture, Technologies, and Mobility Challenges: A Path to SDN-Based Future	
Investigating Impact of 5G Mobility Management Over Handover	

A Study on Challenges Affecting Online Buying Behavior of Consumers  Kanika Budhiraja (GGSIPU, India), Nitika Gupta (Rayat Bahra University, India), Jatinder Kaur (GGSIPU, India), Shreeya Gupta (JDMC, Delhi University, India), Kashish Jain (GGSIPU, India), and Kavita Aggarwal (Rayat Bahra University, India)	566
Adolescent's Purchase Behaviour towards Green Products  Kanika Budhiraja (BMIET(GGSIPU), India), Nitika Gupta (Rayaat Bahara University, India), Jatinder Kaur (BMIET(GGSIPU), India), Aditi Budhiraja (DU, India), and Surbhi Jain (Student, India)	573
Unveiling Revolutionary Applications of Intelligent Technologies Like AI and ML in Real-World Settings  Shagun Tyagi (Graphic Era Hill University, India), Himanshu Kargeti (Graphic Era Hill University, India), Rajesh Tiwari (Department of Management, Graphic Era Deemed to be University, India), Sanjay Singh Chauhan (Uttaranchal Institute of Management, Uttaranchal University, India), and Rajiv Kumar (Computer Science and Engineering Department, Shivalik College of Engineering, India)	581
Real-World Applications of Continual Learning From Theory to Practice	586
Swarm Intelligence for AI Problem Solving Namrata Rajendra Augad (Dr. Vishwanath Karad MIT World Peace University, India) and Vitthal S. Gutte (Dr. Vishwanath Karad MIT World Peace University, India)	590
Exploring the Cognitive Framework: How Students Perceive AI in Financial Decision-Making Shagun Tyagi (Graphic Era Hill University, India), Himanshu Kargeti (Graphic Era Hill University, India), Neha Rastogi (Department of Finance, Doon Business School, India), Rajesh Tiwari (Department of Management studies, Graphic Era Deemed to be University, India), and Anuj Thapliyal (Graphic Era Hill University, India)	597
Predicting Graduation and Dropout Rates: A Machine Learning Approach	603
Applying Healthcare Analytics to Diagnose and Predict Coronary Artery Disease using Machine Learning Techniques  Atreyi Pramanik (Division of Research and Innovation, Uttaranchal University, India), Pranchal Rajput (Division of Research and Innovation, Uttaranchal University, India), and Srinivas Aluvala (SR University)	610
A Comparative Analysis of Machine Learning-Based Classifiers for Predicting Diabetes  Nitisha Aggarwal (Panipat Institute of Engineering & Technology, India), C. Bagath Basha (Kommuri Pratap Reddy Institute of Technology, India), Ashima Arya (KIET Group of Institutions, India), and Neeraj Gupta (Panipat Institute of Engineering & Technology, India)	615

Inmasking The Source: Identifying Human Vs. ChatGPT-Generated Text Through Machine earning
Prerana Singh (B.M. Institute of Engineering and Technology, India), Aditya Pratap Singh (B.M. Institute of Engineering and Technology, India), Sameer Rathi (B.M. Institute of Engineering and Technology, India), and Sonika Vasesi (B.M. Institute of Engineering and Technology, India)
xploring the Convergence of Augmented & Virtual Reality: Applications, Challenges, and
uture Prospects
Comprehensive Review of AI in Healthcare: Exploring Neural Networks in Medical Imaging, LM-Based Interactive Response Systems, NLP-Based EHR Systems, Ethics, and Beyond 63 Neha Sathe (MIT World Peace University, India), Vaibhav Deodhe (MIT World Peace University, India), Yash Sharma (MIT World Peace University, India), and Anand Shinde (MIT World Peace University, India)
Fuzzy Logic Approach to Performance Analysis and Grading through Benchmarking of Load alancers64 Divya Divya (Deptt of CSE, Baba Mastnath University Rohtak, India) and Brij Mohan Goel (Baba Mastnath University Rohtak, India)
Session: Special Session on Data Science and Soft Computing: nnovations in Computational Science and Engineering
Opportunities and Challenges for Developing Machine Learning Models with EHR Data 64 Birendra Kumar Saraswat (GLA University, India), Aditya Saxena (Institute of Engineering & Technology, GLA University, India), and P. C. Vashist (GL Bajaj Institute of Technology and Management, India)
fficacy of Current Dysarthric Speech Recognition Techniques
The Intelligent Multicriteria Analysis of Asthma using Glucocorticoid Toxicity Index (GTI) ased Diagnosis Model

Comparing Logistic Regression and Tree Models on HR Data
A Vision-Based Approach to Enhance Fall Detection with Fine-Tuned Faster R-CNN
Diffusion Tensor Imaging for Investigating Structural Connectivity Patterns in Attention  Deficit Hyperactivity Disorder
PSNR Based Comparative Analysis for Visible and LSB Watermarking to Ascertain Authenticity 693
Malvika Gupta (Sharda University, Greater Noida), Parma Nand (Sharda University, Greater Noida), and Ankur Choudhary (DRS Group)
Strengthening Smart City with Opportunistic Networks: An Insight
Traffic Control System Using Adaptive Technique
A Review on Blockchain-Based Digital Identity Management System
Ensemble Feature Reduction Technique for Flower Species Identification 72.  Shilpa Sethi (J. C. Bose University of Science and Technology, YMCA,  India) and Mamta Kathuria (J. C. Bose University of Science and  Technology, YMCA, India)
Particle Swarm Optimization Algorithm based U-Net Model for MRI Segmentation in Alzheimer's Disease

Hybrid Deep Learning for Wheat Bunt Disease Severity Assessment  Shobhit Shobhit (Department of Mathematics, University Institute of Science, Chandigarh University, India), Gagninder Kaur (Department of Mathematics, University Institute of Science, Chandigarh University, India), Parshant Singh (Department of Mathematics, University Institute of Science, Chandigarh University, India), Adib Ansari (Department of Mathematics, University Institute of Science, Chandigarh University, India), Purvansh Dongre (Department of Mathematics, University Institute of Science, Chandigarh University, India), and Rishav Chandel (Department of Mathematics, University	736
Institute of Science, Chandigarh University, India)  Blockchain-Based Model for Secure and Trusted IoT System	.743
Faridabad, India) and Rewa Sharma (J.C. Bose University of Science and Technology, YMCA, Faridabad, India)	
Capturing Human Gestures for Sign Language Detection: An Advance Technique for Detection to Help Deprived Section of Society	n . 751
Exploration of Different Techniques on Heart Disease Prediction  Keshav Mittal (ABES Engineering College, Ghaziabad), Kartikeya  Srivastava (ABES Engineering College, Ghaziabad), Malvika Gupta (ABES  Engineering College, Ghaziabad), and Puneet Garg (St. Andrews  Institute of Technology & Management, Delhi-NCR, Delhi)	. 758
Enhancing Temporal Information Retrieval through Contextual Query Reformulation	. 765
Image Splicing Detection using Retinex Based Contrast Enhancement and Deep Learning  Mamta Mamta (JC Bose University of Science and Technology, Ymca, India), Anuradha Pillai (JC Bose University of Science and Technology, Ymca, India), and Deepika Punj (JC Bose University of Science and Technology, Ymca, India)	. 771
Exploring Different Techniques for Emotion Detection through Face Recognition	, 779
Comprehensive Analysis of the Architecture and Security of Blockchain-Based Smart Contracts	. 787
	=00