2023 IEEE International Conference on Cloud Computing in Emerging Markets (CCEM 2023)

Mysuru, India **2-4 November 2023**



IEEE Catalog Number: CFP23CCM-POD ISBN:

979-8-3503-6006-6

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:
 CFP23CCM-POD

 ISBN (Print-On-Demand):
 979-8-3503-6006-6

 ISBN (Online):
 979-8-3503-6005-9

ISSN: 2375-8260

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 IEEE International Conference on Cloud Computing in Emerging Markets (CCEM) CCEM 2023

Table of Contents

Message from the Steering Committee Chairs	xi
Message from the General Chairs	xii
Organizing Committee	
Sponsors and Patrons	xvi
Full Research Papers	
Dynastic Nexus: A Hierarchical Genealogy Platform with Network Analysis and Dynamic Visualization Anurita Bose (PES University, India), Smruthi BT (PES University, India), and Trisha Jain (PES University, India)	1
ROS-Kafka Gateway for Scalable, Remote and Cross-Platform Robotic System Communicate Sai Sailaja Policharla (PES University, India), Samyam N (PES University, India), Thejaswi A (PES University, India), Prafullata Auradkar (PES University, India), and P N Anantharaman (PES University, India)	on9
Yoga in Digital Age: A Hybrid Approach using ML and Computer Vision Priya Govindarajan (Amrita Vishwa Vidyapeetham), Achaiah K K (Amrita Vishwa Vidyapeetham), Arjun S Pramod (Amrita Vishwa Vidyapeetham), and Abebe Tesfahun (Debre Markos University, Ethiopia)	16
Deep Learning-Based Techniques for Precise Vehicle Detection and Distance Estimation in Autonomous Systems Srinivasa C (Amrita Vishwa Vidyapeetham, India), Suresha R (Amrita Vishwa Vidyapeetham, India), Manohar N (Amrita Vishwa Vidyapeetham, India), Dharun G K (Amrita Vishwa Vidyapeetham, India), Sheela T (Maharani's Science College for Women (Autonomous), India), and Tian Jipeng (Zhongyuan University of Technology, China)	24

Short Research Papers

LoRa Agri: Agriculture Automation and Intruder Detection System with IoT and LoRa Technology	32
Padmaja Preksha D (Amrita Vishwa Vidyapeetham Karnataka, India), Surabhi R (Amrita Vishwa Vidyapeetham Karnataka, India), and Adwitiya Mukhopadhyay (Amrita Vishwa Vidyapeetham Karnataka, India)	
Random Forest Algorithm for Mitigating Floods and Ensuring Clean Water: IoT-Based	
Monitoring, Harvesting and Purification in Flood-Prone India	41
Revolutionizing Healthcare IoT: A Low-Energy Connectivity Paradigm	47
Solving Ordinary Differential Equationsusingcustom Loss Convolutional Neural Network Method	51
Soumyendra Singh (Amrita Vishwa Vidyapeetham, India), Shaik Atheeq Rasool (Amrita Vishwa Vidyapeetham, India), and R Prasanna Kumar (Amrita Vishwa Vidyapeetham, India)	91
Exodus Bi-Directional LSTM Based Multivariate Texmoji Classification Sreekumar Nedumpally Raman (Amrita Vishwa Vidyapeetham, India), Narendran Sobanapuram Muruganandam (Amrita Vishwa Vidyapeetham, India), Charles Jeyaseelan (Amrita Vishwa Vidyapeetham, India), Gautham Arayalpuram (Amrita Vishwa Vidyapeetham, India), Sreeshanth Parapurathe (Amrita Vishwa Vidyapeetham, India), and Anushob Kavikkal Anand (Amrita Vishwa Vidyapeetham, India)	57
Disease Detection in Areca Nut using Deep Learning KiranKumar B S (Amrita Vishwa Vidyapeetham Mysuru, India), Varshini U (Amrita Vishwa Vidyapeetham Mysuru, India), Manohar N (Amrita Vishwa Vidyapeetham Mysuru, India), and Tian Jipeng (Zhongyuan University of Technology, China)	66
Correlate and Classify The Purpose of Investment using chi-Square Measure and SVM	75
Multi-Label Research Paper Classification and Recommendation System	80
Detection of Authenticity – of Content for Forensics using Forenshield	86

An Ensemble Learning Approach for Malicious Traffic Detection in Wireless Sensor Networks 9 Rakshith B H (Amrita Vishwa Vidyapeetham (Mysuru Campus)), Santhosh Anand (Amrita Vishwa Vidyapeetham (Mysuru Campus)), and Kannan M (Amrita Vishwa Vidyapeetham (Mysuru Campus))	13
Categorizing Participants Based on Their Reaction Time using Eye Tracking)0
Detection and Recognition of Vehicles using Indian Driving Datasets)5
An AI Model for Recognization of Raagas In Indian Classical, Carnatic Music – A Review Article	.0
Impression Management and Self-Presentation: A Survey Among Instagram Users	<u>2</u> 0
Comparative Analysis of Word Embeddings for Text Classification in Spark NLP	30
Groundwater Level Prediction: A Novel Study on Machine Learning Based Approach with Regression Models for Sustainable Resource Management	3 <i>7</i>
Deep Learning Approach for Karnataka Snacks Recognition	13
Orchestrating Consensus Strategies to Counter AI Hallucination in Generative Chatbots	18
Bacterial Wilt Detection From Okra Leaf using Mask - RCNN	;3
End to End Botnet Security in WSN	<u>59</u>

Cloud Gaming: Revolutionizing the Video Gaming Industry
Obfuscated Malware Detection using Multi-Class Classification
TuneOS: Auto-Tuning Operating System Parameters for Varying Database Workloads
Relationship Between Factors Affecting Software Vulnerabilities
AI-Assist Tool to Enhance the Reliability and Accuracy of Automated Speech and Writing Support for Students with Disabilities in Learning Languages
Intelligent and Adaptive Multi-Tiered Taxonomy for Digital Workplace Request Fulfilment Automations and Remediations
An Ensemble Approach to Classify Severity Levels in Chili Leaf Diseases Through Federated Learning CNN

Confluence of Data Privacy and Agriculture: Federated CNN Models for Holy Basil Diseases 2 Varun Jindal (Chitkara University Institute of Engineering and Technology Chitkara University, India), Vinay Kukreja (Chitkara University Institute of Engineering and Technology Chitkara University, India), Prateek Srivastava (Computer Science and Engineering, Graphic Era Hill University, India), Shiva Mehta (Chitkara University Institute of Engineering and Technology Chitkara University, India), and Kireet Joshi (Computer Science and Engineering, Graphic Era Deemed to be University, India)	208
Analysis on Recent Trends in Augmented and Virtual Reality with Haptic Interferences	:14
Verdant Visions: Exploring the Frontier of Peppermint Disease Detection Through CNN and Random Forest	220
Arshleen Kaur (Chitkara University Institute of Engineering and Technology Chitkara UniversityIndia), Vinay Kukreja (Chitkara University Institute of Engineering and Technology Chitkara University, India), Nisha Chandran S. (Graphic Era Hill University, Dehradun, India), Vishal Jain (Sharda University, Greater Noida, U.P., India), and Navin Garg (Computer Science and Engineering, Graphic Era Deemed to be University, India)	
Automation of Categorizing Software Vulnerabilities using NLP Techniques	226
Multi – Stage Canker Disease Detection in Lime Leaves	232
Revolutionizing Spatial Data Collection :The Advancements and Applications of 3D Mapping with Drone Technology (Photogrammetry)	244
$FAST\ RCNN-Based\ Implementation\ of\ Cloudi:\ Converting\ Raw\ Eye\ Gaze\ Data\ into\ Usable\ Format\ .$ 249	
Akshay S (Amrita Vishwa Vidyapeetham, India) and Pradyumna J Bharadwaja (Amrita Vishwa Vidyapeetham, India)	

Author Index		
--------------	--	--