

International Conference on Computer Vision and Internet of Things (ICCIoT'23)

IET Conference Publications 860

Coimbatore, India
7 - 8 December 2023

ISBN: 978-1-7138-9230-4

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571

Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2023) by the Institution of Engineering and Technology
All rights reserved.

Printed with permission by Curran Associates, Inc. (2025)

For permission requests, please contact the Institution of Engineering and Technology
at the address below.

Institution of Engineering and Technology
P. O. Box 96
Stevenage, Hertfordshire
U.K. SG1 2SD

Phone: 01-441-438-767-328-328
Fax: 01-441-438-767-328-375

www.theiet.org

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
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Performance Analysis of CNN Models for Evaluating Biglycan as a Biomarker in Predicting Breast Cancer.....	1
<i>S. Krishnan, Y. B. Sundaresan</i>	
Simulation of Distributed Denial of Service Attack Against Ethereum Smart Contract on the Blockchain.....	7
<i>N. Jeyakkannan, G. Subathra, R. Karthika, A. Lavanya, N. Kirupanithi</i>	
Predictive Maintenance of Shared Electric Vehicle Battery Using Telematics Data	17
<i>R. Tigadi, K. C. Krishnachalitha</i>	
Virtual Reality Powered Training for Industrial New Joiners	23
<i>E. Shanthini, C. Sneha Prabha, H. Sreejaa</i>	
Advancements in Road Surface Classification: A Comprehensive Review of Computer Vision and IoT Approaches	31
<i>J. A. Kovilpillai J, S. Dhar, U. K. Singh, S. Prakash, R. K. Saidala, S. Jayanthi</i>	
IoT Based Patient Monitoring System Towards Improving Quality of Life for Patients with Mild Respiratory Failure	37
<i>S. Vijai, J. Jayakumar, P. S. Hency Jose, K. Rajasekaran, P. A. Christu Raj</i>	
Gastrointestinal Disease Prediction Using Transfer Learning	44
<i>R. Sujatha, D. Helen, U. Hemamalini, V. Divya, A. Priya Dharshini</i>	
Deep Learning Unleashed: Computer Vision-Powered Smart Attendance Tracking.....	49
<i>G. R. Karpagam, S. R. Aadil Arsh, S. Hareesh, S. Karun Vikhash, S. K. Eswaran</i>	
Humanoid Bionic Arm on Robotic Vehicle	56
<i>L. N. Bagyam M, V. S. Jegan, D. Priya K, A. N. Arshad I, P. Leovishnu</i>	
Revolutionizing Retail: The Smart Cart with Automatic Billing and Anti-Theft	61
<i>S. L. Bala Chebolu, S. Muppavaram</i>	
Development of IoT-Enabled Smart Shoe for Gait Prediction and Abnormality Analysis	67
<i>P. Revathi, R. Mouleeshuwarappabu, K. Namitha, P. R. Prabhuraam, V. Praveenkumar</i>	
Detection of Microaneurysms for Diabetic Patients Using Ensemble Method	72
<i>A. Subhasree, P. J. Beryl Princess, S. Silas, G. J. Leelipushpam Paulraj, E. B. Rajsingh</i>	
CNN EYE-An Outlook for the Visually Impaired.....	78
<i>P. Kiran, K. S. Sampada, S. Hemanth, N. Anjan Kumar</i>	
Arrhythmia Classification Using Various Machine Learning Algorithms	83
<i>J. K. Hirani, V. Bendre</i>	
Multi-Class Classification of Arrhythmias with 12-Lead ECG Signals Using One-Dimensional Convolutional Neural Network	89
<i>M. Sowmiya, B. Banu Rekha, M. Harita, S. S. Gurusami</i>	
Image Enhancement by Cascading of Filters for Noise Reduction	96
<i>K. Patil, V. Bendre</i>	

Combined Wavelet and Multiwavelet-Based Convolutional Neural Network (CWM-CNN) for Remote Sensing Image Super Resolution.....	101
<i>S. Sandana J, K. V. Thool, S. Deivalakshmi</i>	
A Hybrid SVD-EMD-Based Approach for Detection of Freezing of Gait in Parkinsons Disease Using Machine Learning Techniques	107
<i>R. Nancy, J. Prasanna, T. George S, B. Kaviya, M. S. P. Subathra</i>	
Cardiac Arrhythmia Detection Using Convolutional Neural Network	114
<i>M. Supe, S. Pujari, V. Bendre, M. Kolte</i>	
Maximum Overlap Discrete Wavelet Packet Transform-Based Feature Extraction for Recognition of Freezing of Gait in Parkinson's Disease Using Gait Signals	119
<i>B. Kaviya, J. Prasanna, R. Nancy, Subathra, T. George S</i>	
An IoT Based Autonomous Outdoor Patrol Robot	126
<i>B. Lakshmanaprakash, P. Rajalakshmy</i>	
Intermittent Fault Detection for MIMO Systems: A Case Study on SCARA Robot	132
<i>J. Aldrini, A. Anil Kumar, I. Chihi, L. Sidhom</i>	
Breast Cancer Detection with Enhanced Automated Noise Filter Using Hybrid Shallow GAN	139
<i>S. Priya, V. Radha</i>	
Cell-Like SNP System with Several Types of Spikes and Generation of Basic Picture Languages	145
<i>Y. P. Ceon, A. H. Christinal, S. Jebasingh, D. A. Chandy</i>	
An Ensemble Technique of SmoteENN and Random Forest for Classification of the Cardiotocography Data.....	150
<i>R. Hephzibah, A. H. Christinal, R. Jayanthi, D. A. Chandy, C. Bajaj</i>	
A Survey of Deep Learning-Based Structural Audits	156
<i>P. M. Futane, D. H. Patil, N. Saravade, J. Desarda, V. Kamble</i>	
Smart Bin: An IoT-Based Bin for Garbage Monitoring.....	162
<i>S. A. Alex, B. G. Briyolan, K. R. Vanadhi, J. R. Jerlin, S. K. Mault</i>	
IoT and Industry 5.0 Revolutionizing Agriculture: A Comprehensive Review of Sustainable Advancements in Precision Farming	167
<i>K. J. Mohan, I. T. Bella Mary, J. J. Paul</i>	
Smart Doctobot - An Assistive Robot for Healthcare.....	174
<i>J. B. John Paul, I. T. Bella Mary, A. D. Andrushia, M. A. P. Manimekalai, N. S. Bhaskar, H. Spencer I</i>	
Interactive Learning Environment for Networking Topics Based on Augmented Reality	179
<i>S. Kanimozhi, L. Sairamesh</i>	
An In-Depth Analysis of Tomato Crop Diseases and Classification Using High-Performance Deep Neural Network	186
<i>R. Chavan, S. Vagare, A. Jadhav, M. Mulande, S. Adhav</i>	
A Comprehensive Survey on Cyber Security Threats and Its Countermeasures for Unmanned Aerial Vehicles	192
<i>A. Sarumathi, K. Latha</i>	

Dynamic Behaviour Analysis of Multi-Cell Battery Packs: A Simulation Study	200
<i>K. Praghash, R. G. Jesuwanth Sugesh, P. S. Neethu, G. Peter, N. Yuvaraj</i>	
Machine Learning Techniques for Prediction of Osteoporosis: A Comprehensive Survey	207
<i>D. Salunke, G. Joshi, S. Inamdar, M. Kulkarni, P. Tekade, S. Rangadale</i>	
Intelligent Diagnostic System for Early Stage Prediction of Diabetes	214
<i>M. Nalini, R. M. Bommi, G. Uganya, A. Mary Joy Kinol</i>	
A Survey on Crowd Detection and Management Using Deep Learning	220
<i>S. Rangdale, N. Jadhav, S. Solav, N. Gayake, S. Nanware, S. Dipmala, P. Tekade</i>	
Characterization of Darknet Traffic Detection Using Time Domain Features.....	229
<i>K. M. Yogesh, T. Stephan, M. B. Bharath, I. Gad, S. Arpitha, M. Prakash</i>	
Pest Detection Using State-Of-The-Art YOLO Models: A Comparative Study.....	234
<i>T. Upadhyay, M. Aamash, M. Mittal, G. Battineni</i>	
Liver Disease Detection Using Machine Learning Methods	240
<i>A. Sharma, A. Dahiya, D. Rastogi, P. Mahajan, P. Nagrath</i>	
IIOT Fault Detection Using Multi Deep Convolutional Neural Networks	247
<i>K. Nithya, R. Kousalya</i>	
Review On: Phobia Detection Using Augmented Reality / Virtual Reality and Data Science	254
<i>S. Rangdale, H. Makote, A. Borkar, R. Sapkal, S. Waghmode, P. Tekade, D. Salunkhe</i>	
Transfer Learning Approach for Brain Tumour Classification Using MRI Images.....	262
<i>M. Vijayalakshmi, N. Keerthika, V. Kiruthika, E. Sathish, A. Sasithradevi</i>	
Air Quality Image Classification Using Ensemble Based Transfer Learning Techniques	268
<i>S. Saradha, M. Praveen Kumar, J. Asha, R. Saranya, S. P. Santhoshkumar</i>	
IoT Vital Sign Monitor	273
<i>R. Katukojwala, K. Varshini Devi, I. Thusnavis Bella Mary, J. John Paul</i>	
Comprehensive Flank Wear Prediction in Cutting Tools Using the FlaPix Algorithm.....	279
<i>R. M. Bommi, G. Uganya, A. Mary Joy Kinol, M. Nalini</i>	
Assessing the Vulnerabilities of Future Generation IoT Devices: A Security Testbed Approach	285
<i>S. Koranne, A. Saxena, P. John</i>	
Performance Analysis of Brain Tumor Identification by Segmentation of Magnetic Resonance Images Using KNN and CNN	289
<i>G. Uganya, A. Mary Joy Kinol, M. Nalini, R. M. Bommi</i>	
Quantum Chain of Things: 'the Quantum Triad - Integrating Blockchain, IoT and Quantum Computing for a Transcendent Future'	294
<i>S. Jain, R. Aggarwal, A. B. Gandhi</i>	
Enhancing Accessibility: Object Detection and Optical Character Recognition for Empowering Visually Impaired Individuals	300
<i>S. Sheela, R. Krishnan, R. Srivathsan, M. Sudharsan, S. Sriram</i>	
Educational Data Mining: A Systematic Review of Machine Learning Algorithms	305
<i>R. B. Nair, G. Naveen Sundar, D. Narmadha</i>	

Image Forgery Detection Using Deep Neural Networks: Current State-Of-The-Art and Future Directions	311
<i>P. Jain, N. Sinha, S. Kaur, S. Koli, A. Sharma</i>	
IoT Based Smart UPS Battery Life Monitoring System.....	319
<i>J. Grace Jency Gnanammal, J. R. Kheshore, P. V. Anandam, R. R. Kamalakkannan, Y. R. Annie Beasant, R. Royal</i>	
IoT Based User Interface in Predicting Human Maladies: A Machine Learning Paradigm	325
<i>C. Kanumuri, R. Torthi, G. Harish Varma, M. Ajay Dilip, P. Maganti</i>	
Revolutionizing Livestock Management: A Multiscale Approach to Cow Recognition System.....	333
<i>R. Newlin Shebiah, S. Arivazhagan</i>	
AI Based Innovative Approach on Precision Agriculture Using IoT.....	338
<i>G. Priyanka, H. Anandakumar</i>	
Detection of Attention Deficit Hyperactivity Disorder Based on EEG Signals Using Singular Value Decomposition.....	343
<i>R. Catherine Joy, A. Albert Rajan, S. Thomas George, M. S. P. Subathra, M. I. Anju, R. A. Rakhi</i>	
Comparative Analysis of Machine Learning Methods for Text Based Depression Detection	352
<i>J. Sheril Angel, A. Diana Andrushia, T. Mary Neebha, S. Riju Suyesh</i>	

Author Index