## 2024 First International Conference on Pioneering Developments in **Computer Science & Digital Technologies (IC2SDT 2024)**

Delhi, India 2-4 August 2024



**IEEE Catalog Number: CFP24VB9-POD ISBN**:

979-8-3503-6502-3

## Copyright © 2024 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:
 CFP24VB9-POD

 ISBN (Print-On-Demand):
 979-8-3503-6502-3

 ISBN (Online):
 979-8-3503-6501-6

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

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-040

Phone: (845) 758-0400 Fax: (845) 758-2633

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



## TABLE OF CONTENTS

Sr. No.	Paper ID	Paper Title	Page No.
1.	4	Car Accident Insurance Claim Verification with Deep Learning	01-06
2.	28	Cloud Based Flood Monitoring- A Review	07-12
3.	30	Deep learning model for the detection of Plant Disease with Precision Agriculture	13-18
4.	31	Blockchain Security and Privacy using Machine Learning and Internet of Things-A Review	19-22
5.	32	Implementation of an Efficient Randomized Lightweight Stream Cipher RRSC 128-AEAD	23-28
6.	35	Challenges and Opportunities in Digital Image Watermarking	29-34
7.	41	Artificial Intelligence and Cyber Security Driven Social Innovations in Digital Adventure Tourism	35-40
8.	45	Strategic Integration of Security Product Standard: A Comparative Study of Early vs. Late Implementation in Software Development	41-45
9.	52	Imbalanced Classification of Cultural Heritage Images using Deep Neural Networks	46-51
10.	70	Evaluating Various Techniques for Twitter Sentiment Analysis for Election Results	52-57
11.	79	The Forensic Investigation Model to Empower Investigation Agencies in the Era of Digital Technology	58-63
12.	80	Towards the Development of eXplainable Digital Twins for Precision Agriculture	64-69
13.	81	Multi-agent Based Social Interaction Model for Neurological Disorder	70-75
14.	85	AI-Driven Smart Irrigation: Enhancing Agricultural Water Efficiency through Intelligent Valve Regulation in Piped and Micro Irrigation Networks	76-81
15.	97	Color Preservation of Lymphoblastic Cells Using Statistical Region Merging	82-86
16.	104	Data Mining Techniques to Enhance Reusability of O-O (Object-Oriented) Systems: A Systematic Review	87-92
17.	111	Enhancing Harris Hawk Optimization for Use in Smart Building Applications	93-97
18.	115	Advancing Water Quality Monitoring: A Comprehensive IoT-Based Approach for Safety Measurement	98-101
19.	117	Comment Compass: An Approach to Analyze YouTube Comments through Web Scraping, Sentiment Analysis, and Generative AI for Actionable Insights	102-106
20.	118	A Comprehensive Analysis of Various Deep Learning based Multi Class Plant Disease Classification Techniques	107-112
21.	121	A Comparative Analysis of Various Deep and Machine Learning Techniques for Web Service Classification	113-118
22.	130	Digital Twins: Implementation and Employment in Technologies	119-124
23.	132	Diagnosing Cardiac abnormalities from PCG using Raw Waveform driven STFT layered convolutional neural network	125-130
24.	134	An Review on Automated Test Data Generation with Java Environment	131-136
25.	139	Attendance Management System Using Geofencing Technology	137-141
26.	142	An Approach of Fog Computing and Edge Computing for Computing Resources Optimization Strategies	142-146

27.	143	Performance Evaluation of Triple-Branch Diversity Receivers in Composite Gamma-Shadowed Rician Fading Channels with AMC and Asymmetric SNR Conditions	147-152
28.	144	Enhancing Network Function Virtualization and Service Function Chaining: Innovative Optimization Strategies and Their Impact	153-157
29.	155	A Machine Learning for Role Based Access Control: Optimizing Role Management and Permission Management	158-163
30.	157	Artificial Intelligence-Driven Big Data Analytics for Business Intelligence in SaaS Products	164-169
31.	170	A Transformer based Indian Signed Language Recognition	170-174
32.	179	A Federated Learning using Probabilistic Data Structures	175-180
33.	184	Exploring Advanced Segmentation Strategies for Breast Cancer Detection: A Comparative Study of U-Net Variants and Ensemble Model	181-185
34.	193	QUERY ME: An Interactive Personalize Discussion Forum for E-Learning and Communication	186-191
35.	197	Exploration of the use of conversational text-based AI tools for academic teachers: a use case and study	192-197
36.	203	Quality Assessment for 3D Coloured Point Clouds in Autonomous Vehicles	198-203
37.	206	NeuroAI: Emerging Artificial Intelligence and Image Processing Techniques in Neuroscience for Enhanced Medical Diagnosis of Brain Tumor	204-209
38.	216	System Dynamics Modeling for Understanding the Adoption of Digital Therapeutics	210-215
39.	218	Classification of Fake News across Online Social Networks using Machine Learning	216-221
40.	220	Statistical and Linguistic Features Based Extractive Text Summarization for English and Hindi Languages	222-227
41.	231	Spatio-temporal Data Analytics for Intelligent Transportation Systems: An Overview	228-233
42.	232	Robustness Analysis of RSGBWPSO Algorithm over Noisy Objective Functions	234-239
43.	248	Health Monitoring for a Person in a Manned Submersible	240-245
44.	249	Mental Health Detection Based On Hybrid Ensemble Stacking Technique	246-251
45.	251	Classification of Mental Workload Using 1D-CNN with Transfer Learning	252-256
46.	254	Inventory Optimization of Multi-Echelon Supply Chain under Market Uncertainties	257-262
47.	264	Enhancing Human Pose Estimation: A Data-Driven Approach with MediaPipe BlazePose and Feature Engineering Analysing	263-268
48.	280	Machine Learning Optimization for Sentiment Analysis in Movie Reviews Based on YouTube Comments	269-272
49.	282	Driving Innovation: Creating a Dataset for Automotive Ad Campaign Analysis	273-278
50.	283	Lora-Based Data Transmission System for Smart Buildings	279-284
51.	285	Sign Language Recognition Systems : A Comprehensive Review	285-290
52.	290	Evaluating Reduced-Tag MRAM Architectures for Enhanced Performance in Last- Level Caches	291-296
53.	294	Breast Cancer Histopathological Image Classification using PIP-Net	297-302
54.	310	Soil Analysis Using Deep Learning for Precision Agriculture	303-307

55.	324	Assessing the role of Trust & Perceived Enjoyment in VR/AR based Banking using TAM	308-313
56.	340	Raw-Waveform based Bark Scale Initialized SincNet Model in Child Speaker Identification	314-319
57.	345	Ensemble Techniques for Mental Illness Prediction: Development and Evaluation	320-325
58.	350	Smart Toll System with Theft Detection Using Tesseract	326-331
59.	362	Comparative Analysis of Machine Learning and Deep Learning Techniques for Social Media-Based Stress Detection	332-337
60.	381	OCTNet: Leveraging VGG16 for Automated Classification of Retina Health from OCT Scans	338-343
61.	382	Navigating Financial Complexity: The Role of a Tailored Finance Tracker Application for Small Businesses	344-349
62.	384	Intercepting the Invisible: Monitoring and Analyzing Suspicious Web Threat Interactions	350-354
63.	390	Enhanced Multi-Model Approach for Motion and Violence Detection using Deep Learning Methods using Open World Video Game Dataset	355-360
64.	391	ARIMA model-based prediction of pH for Hydroponic Vertical Farm	361-364
65.	401	Next-Gen Speech Disorder Diagnostics: CNN Methods for Dysarthria Classification	365-369
66.	406	Advanced Vibration Analysis for Predictive Maintenance in Wind Turbines	370-374
67.	415	Analyzing the Impact of Social Media Dynamics through Sentiment Analysis: A Case Study on Influencer-generated Content and Response on Recommendation Systems amidst the Lakshadweep-Maldives Situation	375-380
68.	417	A Comparative Study of a Hybrid Recommender System Merging Collaborative and Content-Based Strategies for Nutritional Tailoring in Children	381-386
69.	424	Aqua Algorithms Enhancement of Water Quality Prediction with ML Bagging Techniques	387-389
70.	425	Predictive Heart Guard: Using Support Vector Machines for Early Warning Systems	390-392
71.	427	AI Insights: Revolutionizing Mental Health Assessments through Predictive Models	393-397
72.	428	Targeted Insights: Advanced Gradient Boosting Models for Accurate Obesity Risk Evaluation	398-402
73.	430	Reimagining Health Tracking: Raspberry Pi Innovations for Holistic Wellness	403-407
74.	437	Optimizing Melanoma Diagnostic Accuracy through Deep Learning and Attention Mechanisms	408-412
75.	441	Sound Wave Scribe: Bridging Spoken Language and Written Text	413-417
76.	447	Blockchain or AI: Web Applications Security Mitigations	418-423
77.	455	Designing an Intelligent Door Access System Utilizing Biometric NFC Bands and OTP Authentication Techniques	424-428
78.	464	Seismic Safeguard Based On Intelligent System And Power Management	429-433
79.	465	Empirical Evaluation Of A Cybersecurity Powered Human Body Data Communication Over Wireless Body Area Network	434-439
80.	472	A Dynamic Hand Gesture Evaluation Model to Control Media Player using IoT based Elevated Deep Learning Scheme	440-445
	•	•	•

81.	479	Innovations in Image Forensics: Designing a Smart Learning based Methodology for Forgery Detection over Digital Images	446-450
82.	480	Revolutionizing Connectivity: Unveiling Next-Gen Efficiency with 6G's Ultra-Reliable Low Latency Communications Resource Allocation	451-455
83.	486	A Comprehensive Evaluation of Fake Face Recognition Scheme using Artificial Intelligence Oriented Learning Scheme	456-461
84.	487	Modelling A Novel Linear Transformed Attention Mechanism For Intrusion Detection Using Learning	462-466
85.	497	Comparative Analysis of Machine Learning Algorithms for Alzheimer's Disease Identification: A Comprehensive Evaluation	467-471
86.	499	Perceptions and Impact of Blockchain Technology And Fintech: A Survey-Based Study	472-476
87.	503	Explainable Artificial Intelligence For Pseudo Social Media Profile Detection	477-482
88.	505	Canine Vertebral Column Segmentation Using Deep Learning	483-487
89.	516	Automatic Stress Recognition using FACS from Prominent Facial Regions	488-492
90.	523	Identification of sugarcane leaf diseases and deficiency disorders using transformers	493-498
91.	525	Simuhack: A Realistic Attack Simulation Framework for Enhancing Cybersecurity in Autonomous Vehicles	499-504
92.	526	Advanced Pothole Detection System: Leveraging CNNs for Safer Roads	505-509
93.	529	A Survey on Recent Developments in Software Vulnerability Detection	510-515
94.	531	Enhancing Artificial Intelligence and Machine Learning Understanding Through EnVision: A Virtual Reality Approach	516-521
95.	534	BlockMQ: Blockchain Assisted MQTT Authentication	522-527
96.	535	Classifying Alzheimer's Disease Stages via Bootstrap Aggregation of CNN Architectures on MRI Scans	528-533
97.	538	Person Re-identification: A Retrospective Study, Recent Trends and Future Scope	534-539
98.	540	Multiview learning and Decision Fusion Based Ensemble to Predict Anti-Cancer Peptide	540-545
99.	545	Blockchain Based Fake Product Detection System: Enhancing Supply Chain Transparency	546-550
100.	546	Vision Transformer Implementation on Edge GPU (AGX Orin) for Image Classification	551-556
101.	547	HBTrackr: AI-based Heart Attack Prediction through ECG Monitoring on Wearable Devices	557-562
102.	548	Integrated Violence and Weapon Detection using Deep Learning	563-568
103.	549	Evaluating DDoS Detection and Mitigation in SDN at Various Attack Rates	569-574
104.	550	Transforming Household Waste Management: Design and Implementation of an IoT-Enabled Smart Dustbin System	575-580
105.	555	A Novel Image Segmentation-based Hemolysis Detection Method for Red Blood Cells	581-585
106.	559	Probabilistic Markow Modeling with Trading Strategies for Efficient Stock Market Predictions	586-591
107.	561	An Optimized SIMON Lightweight Image Encryption Algorithm for Internet of Things: Balancing Performance and Security	592-597
			-

108.	576	Optimized Low Weight CNN Concatenation Using Deep Curve Estimation for Low Light Image Enhancement	598-603
109.	581	Alzheimer's Disease Detection And Classification: A Survey	604-609
110.	583	Android Based Malware Detection Technique Using Machine Learning Algorithms	610-615
111.	584	Exploring the Role of Internet of Things in Wireless Sensor Networks for Industry 4.0 Applications	616-621