

2022 2nd International Conference on Computing and Information Technology (ICCIT 2022)

**Tabuk, Saudi Arabia
25 – 27 January 2022**



**IEEE Catalog Number: CFP22U60-POD
ISBN: 978-1-6654-1175-2**

**Copyright © 2022 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: | CFP22U60-POD |
| ISBN (Print-On-Demand): | 978-1-6654-1175-2 |
| ISBN (Online): | 978-1-6654-3605-2 |

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

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

| Paper No. | Title of Paper | Page No. |
|-----------|---|----------|
| 1. | Nonlinear uncertain process monitoring | 1 |
| 2. | Multifactor Authentication Approach on Internet of Things: Children's Toys | 6 |
| 3. | Security in Social Media: Awareness of Phishing Attacks Techniques and Countermeasures | 10 |
| 4. | Real Time Parking System Algorithms | 17 |
| 5. | Capacity Analysis under Random Blockage in Internet of Things over F Distribution | 21 |
| 6. | A Comparison of Topic Modelling Algorithms on Visual Social Media Networks | 26 |
| 7. | Image Steganography using Least Significant Bit (LSB) – A Systematic Literature Review | 32 |
| 8. | A Model Driven Framework for Efficient Bandwidth Allocation in Fog Computing Using Priority Algorithm | 39 |
| 9. | The Effect of Contextual Information on the Personalization Features of Learning in the Online Learning Recommendation System | 45 |
| 10. | A New Algorithm to Find the Kth Smallest Element in an Unordered List (Efficient for Big Data) | 51 |
| 11. | Survey on Image Steganography Techniques | 57 |
| 12. | Low Latency Packet Delivery for SOHO Infrastructure | 65 |
| 13. | Intelligent Systems of Warning and Alarms for Applying at Nuclear Facilities | 69 |
| 14. | Proposing a Novel Secure Methodology for Photo Sharing in Online Social Networks | 75 |
| 15. | Reinforcement Learning in Image Classification: A Review | 79 |
| 16. | Cybersecurity threats to Healthcare Sectors during Covid-19 | 87 |
| 17. | Developing Food Charity Operations Management System | 93 |
| 18. | An Attention-based Hybrid 2D/3D CNN-LSTM for Human Action Recognition | 97 |
| 19. | Integration of Smart Traffic Fog Nodes and Homes through a Model Driven Approach | 104 |
| 20. | Common Attacks on Near Field Communication Technology | 110 |
| 21. | Security of Containerized Computer Vision Applications | 115 |
| 22. | Big Data Framework for Heart Diseases Prediction in Saudi Arabia | 121 |
| 23. | Mobility Support for Reduced-State Routing | 126 |

TABLE OF CONTENTS

| | | |
|-----|---|-----|
| 24. | De-noising diseased plant leaf image | 130 |
| 25. | Priority-based Resource Allocation Scheme for Mobile Edge Computing | 138 |
| 26. | IoT Based Patient Health Monitoring System to Combat COVID-19 Pandemic | 144 |
| 27. | Machine learning for Autopsy reports Forensic using Text Classification Techniques | 148 |
| 28. | Security of Internet of Things: A review of Challenges in integrating Blockchain with IOT | 154 |
| 29. | A survey on IoT Routing: Types, Challenges and Contribution of Recent Used Intelligent Methods | 161 |
| 30. | A Simplified Traffic Flow Monitoring System Using Computer Vision Techniques | 167 |
| 31. | A survey of data mining methods for early prediction of students' performance | 171 |
| 32. | An Automatic Road Crack Detection System | 175 |
| 33. | A Novel Steganography Approach to Embed Secret Information into a Legitimate URL | 180 |
| 34. | Gateway Redundancy Protocols in The Smart Grid | 186 |
| 35. | Improving the Virtual Educational Platforms for the Deaf and Dumb under the Covid-19 Pandemic Circumstances | 191 |
| 36. | Automatic Test Data Generation Using Genetic Algorithm for Python Programs | 197 |
| 37. | Private Keys Based Lightweight Multi-Objective Cipher. Development and Evaluation | 206 |
| 38. | High-performance Detection and Prediction Safety System using HUAWEI Atlas 200 DK AI Developer Kit | 213 |
| 39. | Smart Seed Classification System based on MobileNetV2 Architecture | 217 |
| 40. | Temporal performance evaluation of Hadoop Variants for Diabetes Big Data | 223 |
| 41. | V-EduGram: Voice-based Control Technique of Hologram Technology in Education | 230 |
| 42. | A New Petri Nets for WSNs to Model the Behaviour of Solar-Energy Harvesting Sensors with Double Sleeping Strategy | 237 |
| 43. | NoInjection: Preventing Unsafe Queries on NoSQL-Document-model Databases | 243 |
| 44. | Blockchain Enabled Track-and-Trace Framework for Covid-19 Immunity Certificate | 248 |
| 45. | Implementation of Smart Card for Promoting Higher Education in the Developing World | 254 |
| 46. | Makkah Landmark Recognition Using Deep Learning | 260 |

TABLE OF CONTENTS

| | | |
|-----|---|-----|
| 47. | UAV Aided Fog Network (UAFN): A Proposal Framework for Better QoS | 265 |
| 48. | Cooperative Control between Multi-UAVs for Maximum Coverage in Disaster Management: Review and Proposed Model | 271 |
| 49. | Smart Home : Household Appliance usage Recommender and Monitoring System (HARMS) | 278 |
| 50. | Kingdom of Saudi Arabia: Era of Smart Cities | 285 |
| 51. | Curating Datasets from GPS, Communication Technology and Social Media Data for Traffic Prediction, Analysis and Management | 293 |
| 52. | Blockchain for IoT based Educational Framework and its Credentials | 298 |
| 53. | Semantic Web for Meteorological and Oceanographic Data | 304 |
| 54. | Balanced Data Traffic Over Internet of Things Network to Reduce Power Consumption using Distributed Scheme | 310 |
| 55. | Stakeholder Identification Overview and Challenges in Requirements Engineering Prospective | 314 |
| 56. | Comparative Performance Analysis of Kernel Functions in Support Vector Machines in the Diagnosis of Pneumonia using Lung Sounds | 320 |
| 57. | A Systematic Approach for Malware URL Recognition | 325 |
| 58. | FPGA Implementation of Adaptive NMLS Algorithm: Timbre Based Filtering from Multiple Harmonics using FIR filters | 330 |
| 59. | Using Artificial Intelligence to Protect, Detect and Mitigate Oil and Gas Sectors of KSA from Drone and Missile Assaults | 335 |
| 60. | Deep Learning Technique for Fingerprint Recognition | 340 |
| 61. | Detection of HTTP Attacks using Machine Learning | 344 |
| 62. | An Intrusion Detection System for Identifying Simultaneous Attacks using Multi-Task Learning and Deep Learning | 349 |
| 63. | Configuration of Business Process Workflow in Software as a Service: Validation of Constraint Dependency relationships | 359 |
| 64. | Grid File index in Big Data Crowdsourcing | 363 |
| 65. | An Intelligent Moth Flame Optimization with Inception Network for Diabetic Retinopathy Detection and Grading | 370 |
| 66. | An Integrated Authentication Scheme for Supervisory Control and Data Acquisition System Based on Quantum Key Distribution | 374 |
| 67. | Machine Learning approach to Predict Cognitive Performance using HRV | 379 |

TABLE OF CONTENTS

| | | |
|-----|---|-----|
| 68. | A Principled Design of Intelligent Agent for the SLA negotiation process in cloud computing | 383 |
| 69. | Detection of Man in The Middle Attack using Machine learning | 388 |
| 70. | The impact of using IoT for Elderly and Disabled people Healthcare: An overview | 394 |
| 71. | Real Time Face Recognition Based on Residual Neural Network | 399 |
| 72. | Authentication Enhancement Against SQL Injection Attacks (SQLIAs) | 405 |
| 73. | A Framework for Blockchain and Fogging-based Efficient Authentication in Internet of Things | 409 |
| 74. | A Review on Communication Protocols of Industrial Internet of Things | 418 |
| 75. | Multiple-Input and Multiple-Output (MIMO) Channel Measurement in Heterogeneous Networks | 424 |
| 76. | Weather and Climate Forecasting System for Cultivation using Naive's Algorithm | 428 |
| 77. | A Real Time IoT Measurement System for Hydroponics Cultivation | 432 |
| 78. | Implying Fuzzy Set for Computing Agricultural Vulnerability | 436 |
| 79. | A Survey on Blockchain Technology for Network Security Applications, | 440 |
| 80. | Ontology development methodology: a systematic review and case study | 446 |
| 81. | Triggering Differential Privacy to Counter Inference in Statistical Database Security | 451 |