1. Record Nr. UNINA9910841861203321

Titolo	Advances in Intelligent System and Smart Technologies : Proceedings of I2ST'23 / / edited by Noredine Gherabi, Ali Ismail Awad, Anand Nayyar, Mohamed Bahaj
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2024
ISBN	3-031-47672-7
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (417 pages)
Collana	Lecture Notes in Networks and Systems, , 2367-3389 ; ; 826
Disciplina	006.3
Soggetti	Computational intelligence Artificial intelligence Computational Intelligence Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- Specific Topics -- Committee -- Keynote Speakers -- About This Book -- Contents -- A New Design of 5G Planar Antenna with Enhancement of the Gain Using Array Antenna -- 1 Introduction -- 2 Design Methodologies -- 2.1 A Conventional Square Patch Antenna's Design -- 2.2 Design of a 1 × 4 Antenna Array Containing 4 Radiation Elements -- 2.3 Design of a 4 × 4 Antenna Array Containing 16 Radiation Elements -- 2.4 Design of a 8 × 4 Antenna Array Containing 32 Radiation Elements -- 3 Conclusion and Perspectives -- References -- Temperature Forecast Using Machine Learning -- 1 Introduction -- 2 Related Work -- 3 Methodology -- 4 Study Area -- 5 Results and Discussion -- 6 Conclusion -- References -- Digital Twin-Based Approach for Electric Vehicles: E-Mule Project -- 1 Introduction -- 2 Digital Twin: Background and Definitions -- 3 Related Works -- 4 E-Mule Digital Twin -- 4.1 Induction Motor -- 4.2 Lithium-Ion Battery -- 5 Technical Solutions -- 5.1 Data Collection -- 5.2 Data Transmission -- 5.3 3D Modeling -- 6 Conclusion -- References -- Vision-Based Fall Detection Systems Using 3D Skeleton Features for Elderly Security: A Survey -- 1 Introduction -- 2 Fall Detection System: Overview -- 3 Fall Detection Skeleton Datasets -- 3.1 Human Body

Representation -- 3.2 Available 3D Skeletal Datasets -- 3.3 Limitation and Challenges -- 4 Vision-Based Fall Detection Approaches -- 5 Conclusion -- References -- Capacity Prediction for Lithium-Ion Batteries Using Different Neural Networks Methods -- 1 Introduction -- 2 Proposed Methods -- 3 Capacity Estimation -- 3.1 Nasa Datasets Prediction -- 4 Comparative Results Analysis -- 5 Conclusion -- References -- Deployment of Deep Learning in BlockChain Technology for Credit Card Fraud Prevention -- 1 Introduction -- 2 Background and Motivation -- 2.1 What is Blockchain?.
2.2 How Does the Blockchain Work? -- 2.3 Strengths of Blockchain -- 2.4 BlockChain Weaknesses -- 2.5 Chainlink -- 3 Methodology -- 3.1 Deep Learning Model -- 3.2 Blockchain -- 3.3 External Adapter -- 3.4 Cryptocurrency -- 4 Visualization -- 4.1 Normal User -- 4.2 Contract's Owner -- 5 Conclusion -- References -- A Survey on Cybersecurity Techniques Toward Convolutional Neural Network -- 1 Introduction -- 2 The Fundamentals of CNN -- 3 Security Threats Toward CNN -- 4 Detection Techniques of CNN -- 4.1 Malware Classification -- 4.2 Malware Detection -- 5 Conclusion -- References -- Publications and Messages Exchanged in a Chat Room Analysis -- 1 Introduction -- 2 Related Work -- 3 Proposed Model and Algorithms -- 3.1 Centers of Interests -- 3.2 Psychological Profile -- 3.3 Relational Profile -- 4 Results and Discussion -- 4.1 Profiling System Result -- 5 Conclusion -- References -- Detection of Common Risk Factors Leading to the Cardiovascular Illness Using Machine Learning -- 1 Introduction -- 2 Related Works -- 3 Methodology -- 3.1 BRFSS Heart Disease Dataset -- 3.2 Datasets Preprocessing -- 3.3 Model Training -- 4 Results -- 5 Discussion -- 6 Conclusion -- References -- Machine Learning Models for Detection COVID-19 -- 1 Introduction -- 2 State of the Art -- 3 Functional Testing Methods -- 3.1 PCR Test -- 3.2 Chest Radiography Images -- 4 COVID19 Detection Models Using Machine Learning Approaches -- 5 Comparison Study Between Methods -- 6 Conclusion and Discussion -- References -- DoS and DDoS Cyberthreats Detection in Drone Networks -- 1 Introduction -- 2 Context of the Study -- 2.1 Fleet of Drones -- 2.2 DoS and DDoS Cyber-Attacks -- 2.3 Network Intrusion Detection Systems (NIDS) -- 3 Related Work -- 3.1 State of the Art -- 3.2 Discussion -- 4 Proposed Approach -- 4.1 Architecture of the Proposed NIDS.
4.2 Operating Principle of the Proposed Model of NIDS -- 5 Experimentation and Tests -- 5.1 CICIDS2017 Dataset -- 5.2 Algorithms Used to Model Benign Network Traffic and DoS/DDoS Attacks -- 6 Summary of Benign Traffic and Attacks Classification Results -- 7 Conclusion -- References -- Artificial Intelligence in Supply Chain 4.0: Using Machine Learning in Demand Forecasting -- 1 Introduction -- 2 Demand Forecasting in Supply Chain -- 3 Machine Learning Model for Demand Forecasting in Supply Chain -- 3.1 Methodology -- 3.2 Data Visualization -- 3.3 Data Segmentation -- 3.4 Data Modeling -- 3.5 Model Evaluation -- 3.6 Comparison of Classifications Models -- 4 Conclusion -- References -- COVID-19 Prediction Applying Machine Learning and Ontological Language -- 1 Introduction -- 2 Literature Review -- 3 Methodology of Research -- 3.1 Data Preprocessing -- 3.2 Machine Learning Decision Tree Algorithm -- 3.3 Ontology Engineering -- 4 Result and Discussion -- 5 Conclusion -- References -- EEG-Based Drivers Drowsiness Prediction Using Personalized Features Extraction and Classification Methods Under Python -- 1 Introduction -- 2 Method -- 2.1 Acquisition and Preprocessing -- 2.2 Main Processing Method -- 2.3 Classification and Predicting -- 3 Results and Discussion -- 4 Conclusion -- References -- A Systematic Review on Blind and Visually Impaired

Navigation Systems -- 1 Introduction -- 2 Literature Review -- 2.1 Research Methodology -- 2.2 State-of-the-Art -- 3 Discussion and Recommendations -- 3.1 Discussion -- 3.2 Recommendations -- 4 Conclusion and Future Work -- References -- Comparison of Deep Learning-Based Channel Estimator and Classical Estimators in VANET -- 1 Introduction -- 2 IEEE 802.11p Standard -- 2.1 Environment and Vehicle-To-Vehicle Channel -- 2.2 Channel Vehicle-to-Vehicle Model -- 3 Estimation and Interpolation of Channel.
3.1 LS Channel Estimation Algorithm -- 3.2 MMSE Channel Estimation Algorithm -- 3.3 Linear Interpolation -- 3.4 Spline Cubic Interpolation -- 4 Channel Estimators Based on Neural Networks -- 4.1 Estimator and Structure OFDM -- 4.2 Channel Estimator Structure of Basic Neural Network -- 5 Simulation and Resultats -- 5.1 Simulations Parameters -- 5.2 Channel's Coherence Time Effect -- 6 Conclusion -- References -- Decision Support Systems Based on Artificial Intelligence for Supply Chain Management: A Literature Review -- 1 Introduction and Motivation -- 2 Concepts -- 2.1 Supply Chain Management -- 2.2 Decision Support System -- 3 DSS Based IA for SCM: A Literature Review -- 3.1 Research Methodology -- 3.2 Adopted IA Methods in SCM -- 4 Discussion -- 5 Conclusion -- References -- Minimization of Task Offloading Latency for COVID-19 IoT Devices -- 1 Introduction -- 2 Related Work and Motivation -- 2.1 Latency -- 2.2 Energy Consumption -- 3 System Model -- 4 Problem Formulation -- 5 Results and Discussion -- 6 Conclusion and Perspectives -- References -- Machine Learning, Deep Learning, and Computer Vision for Age and Gender Detection -- 1 Introduction -- 2 Related Work -- 3 Dataset -- 4 Methods and Materials -- 4.1 Computer Vision -- 4.2 Machine Learning -- 4.3 Deep Learning -- 4.4 Model Architecture Overview -- 5 Results and Discussion -- 6 Conclusion -- References -- Grape and Apple Plant Diseases Detection Using Enhance DenseNet121 Based Convolutional Neural Network -- 1 Introduction -- 2 Related Work -- 3 Material and Method -- 3.1 Dataset -- 3.2 Image Preprocessing and Data Augmentation -- 3.3 Convolutional-Neural-Network Models -- 3.4 Transfer-Learning Approach -- 3.5 Proposed System -- 4 Experiment Results -- 4.1 Performance Evaluation -- 4.2 Parameters -- 4.3 Results Analysis and Comparison -- 5 Conclusion -- References. Operational Code Based on the Lattice Boltzmann Method for Coastal Flows: Application to Oualidia Lagoon -- 1 Introduction -- 2 Presentation of the Shallow Water Equations -- 3 Lattice Boltzmann Method (LBM) -- 3.1 Lattice Pattern -- 3.2 Boundary Conditions -- 4 Flowchart of the Operational Code -- 5 Numerical Test -- 6 Application to Oualidia Lagoon -- 7 Conclusion -- References -- The Use of Chatbots as Supportive Agents in Air Transportation Systems -- 1 Introduction -- 2 Literature Review -- 3 Chatbots and Artificial Intelligence -- 3.1 Chatbots -- 3.2 Artificial Intelligence and Chatbots -- 3.3 Chatbot Frameworks -- 4 The Proposed Methodology -- 4.1 Case Study -- 4.2 Conception of Chatbot -- 5 Results and Discussion -- 6 Conclusion -- References -- The Conception of a Controlled Trigonometric Phase Locked Loop Working Under Grid Anomalies Conditions -- 1 Introduction -- 2 Methods -- 2.1 A Conventional PLL in the Synchronous dq Frame -- 2.2 Trigonometric Phase Locked Loop -- 3 Results and Discussion -- 3.1 Time Response of the Controlled PLL and Angle Jump Test -- 3.2 Unbalanced Grid Voltage -- 3.3 Non Sinusoidal Grid Voltage -- 4 Conclusion -- References -- A Deep Learning Model for Intrusion Detection with Imbalanced Dataset -- 1 Introduction -- 2 Related Work -- 3 Background -- 4 Deep Learning -- 4.1 Feature Selection -- 5 Our Approach -- 5.1 NSL-KDD -- 5.2 Shap Value, Boruta and Anova f-test -- 6 Experimental Results

and Discussion -- 7 Conclusion -- References -- Towards Complex Systems Behavioral Prediction: A Survey of Artificial Intelligence Applications -- 1 Introduction -- 1.1 Complex Systems -- 1.2 Characteristics of Complex Systems -- 1.3 Complex Adaptive Systems -- 2 Flood Prediction -- 3 Fetal Monitoring -- 4 Electrical Systems and Renewable Energies -- 5 Extreme Events and Critical Transitions -- 6 Forest Fire.
7 Financial Markets.

Sommario/riassunto

This book is a collection of high-quality peer-reviewed research papers presented at The International Conference on Intelligent Systems and Smart Technologies (I2ST’23) held at the Faculty of Science and Technology of Hassan First University, Morocco, on January 17–18, 2023. I2ST'23 is a forum for presenting new advances and research results in the fields of information, communication, and smart technologies. The book discusses significant issues relating to machine learning, smart technologies, and data analytics. The main and distinctive topics covered are: I) AI& Intelligent, II) Systems Smart Technologies, III) Communications and Networking, IV) Software Engineering & Web Applications, V) Information Technology, and VI) Software Engineering & Web Applications.