

1. Record Nr.	UNISA996500062703316
Titolo	Intelligent data engineering and automated learning - IDEAL 2022 : 23rd International Conference, Manchester, UK, November 24-26, 2022, proceedings / / Hujun Yin, David Camacho, Peter Tino, editors
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2022] ©2022
ISBN	3-031-21753-5
Descrizione fisica	1 online resource (564 pages)
Collana	Lecture Notes in Computer Science ; ; 13756
Disciplina	006.312
Soggetti	Data mining Database management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- Organization -- Contents -- Main Track -- Ensemble Stack Architecture for Lungs Segmentation from X-ray Images -- 1 Introduction -- 2 Related Works -- 3 Methodology -- 4 Experiment -- 4.1 Evaluation Protocols -- 4.2 Dataset -- 4.3 Training Regime -- 4.4 Results -- 5 Comparison with State-of-the-Arts -- 6 Conclusion -- References -- Synonym-Based Essay Generation and Augmentation for Robust Automatic Essay Scoring -- 1 Introduction -- 2 Related Work -- 3 Proposed Methodology -- 3.1 Synonym Replacement and Essay Generation -- 3.2 Data Augmentation -- 4 Scoring Models -- 5 Experiment -- 5.1 Data Sets -- 5.2 Essay Pre-processing -- 5.3 Evaluation Methodology -- 6 Results and Discussion -- 6.1 Improving Robustness with Adversarial Data Augmentation and Training -- 7 Conclusions -- References -- Characterizing Cardiovascular Risk Through Unsupervised and Interpretable Techniques -- 1 Introduction -- 2 Materials and Methods -- 2.1 Dataset Description -- 2.2 Unsupervised and Interpretable Methods -- 3 Experimental Results -- 3.1 Characterization of Clusters and CVD Risk Analysis -- 4 Conclusions -- References -- Identification of Sedimentary Strata by Segmentation Neural Networks of Oblique Photogrammetry of UAVs -- 1 Introduction -- 2 Theoretical Foundations and Related Works -- 3 Data and Methods -- 3.1

Segmentation Architecture -- 3.2 Dataset -- 4 Experiment and Discussion -- 4.1 Experiment -- 4.2 Discussion -- 5 Conclusion -- References -- Detection of False Information in Spanish Using Machine Learning Techniques -- 1 Introduction -- 2 Background and Related Work -- 3 Data and Resources -- 4 Methodology -- 4.1 Linguistic Features -- 4.2 The Conceptual Architecture of the Fine-Tuned Model -- 4.3 The Technological Implementation -- 4.4 Evaluation Metrics -- 5 Results -- 6 Conclusions and Future Work -- References.

An Approach to Authenticity Speech Validation Through Facial Recognition and Artificial Intelligence Techniques -- 1 Introduction -- 2 State of Data -- 2.1 Deception Detection Techniques -- 2.2 Face Recognition and Face Features Extraction -- 3 Experiment -- 3.1 Framework -- 3.2 Dataset -- 3.3 Concept Proof -- 3.4 Training Details -- 4 Results and Discussion -- 4.1 Dataset Analysis -- 4.2 RNN Model -- 5 Conclusion -- References -- Federating Unlabeled Samples: A Semi-supervised Collaborative Framework for Whole Slide Image Analysis -- 1 Introduction -- 2 Methodology -- 2.1 Problem Formulation -- 2.2 Federated Model -- 2.3 Self-trained Student Model -- 3 Experiments and Results -- 3.1 Dataset -- 3.2 Implementation Details -- 3.3 Validation of the Framework -- 3.4 Results of the Proposed Framework -- 4 Conclusion -- References -- Automatic Exploration of Domain Knowledge in Healthcare -- 1 Introduction -- 2 Background -- 3 DANKFE - DomAiN Knowledge Based Feature Engineering -- 4 Case Study: Prediction During COVID-19 Pandemic -- 4.1 Experimental Results -- 5 Conclusion -- References -- On Studying the Effect of Data Quality on Classification Performances -- 1 Introduction -- 2 C1: The Perceived Difficulty of Using a Method According to Experts -- 3 How Good Is a Repairing (Study of C2 to C5) -- 3.1 Empirical Setup -- 3.2 C2: Impact of the Degradation of the Data on Repairing Effectiveness -- 3.3 C3: Effectiveness of the Repairing Tools -- 3.4 C4 and C5: Impact of the Type of Error and Impact of the Classification Model -- 4 Discussion -- 4.1 Is It Always Better to Repair Data? -- 4.2 Threats to Validity -- 5 Conclusion -- References -- A Binary Water Flow Optimizer Applied to Feature Selection -- 1 Introduction -- 2 Water Flow Optimizer -- 2.1 Laminar Operator -- 2.2 Turbulent Operator -- 2.3 Algorithm -- 3 Proposal: Binary Water Flow Optimizer (BWFO).

3.1 Binary Laminar Flow Operator -- 3.2 Binary Turbulent Flow -- 3.3 Framework BWFO -- 4 Simulations and Discussions -- 5 Conclusion -- References -- Benchmarking Data Augmentation Techniques for Tabular Data -- 1 Introduction -- 2 State of Art -- 3 Experiments -- 3.1 Data -- 3.2 Assessment Metrics -- 3.3 Experimental Results -- 4 Conclusion -- References -- Deep Learning Based Predictive Analytics for Decentralized Content Caching in Hierarchical Edge Networks -- 1 Introduction -- 2 Literature Review -- 3 Related Works -- 4 Methodology -- 4.1 System Architecture -- 4.2 Dataset Preprocessing -- 4.3 Model Specification -- 5 Implementation -- 5.1 Constructing the Model -- 5.2 Content Caching and Replacing -- 6 Result Analysis -- 7 Conclusion -- References -- Explanations of Performance Differences in Segment Lining for Tunnel Boring Machines -- 1 Introduction -- 2 Related Work -- 3 Methods -- 3.1 Performance Classification -- 3.2 Model Evaluation -- 4 Results -- 4.1 Model Performance Comparison -- 4.2 Feature Representation Extraction -- 5 Discussion -- 6 Conclusion -- References -- On Autonomous Drone Navigation Using Deep Learning and an Intelligent Rainbow DQN Agent -- 1 Introduction -- 2 Preliminaries -- 2.1 Value Function -- 2.2 Multilayer Perceptron Neural Networks -- 3 Methodology -- 3.1 Deep Q Networks -- 3.2 Double Deep Q Networks -- 3.3 Learning with Multiple Training Cycles

-- 3.4 Rainbow Agent -- 3.5 Problem Formulation -- 4 Experimental Results -- 5 Conclusions and Future Work -- References -- An Intelligent Decision Support System for Road Freight Transport -- 1 Introduction -- 2 Related Work -- 3 Materials and Methods -- 3.1 Problem Formulation -- 3.2 Proposed IDSS -- 3.3 Evaluation Methodology -- 4 Results -- 4.1 Developed IDSS Prototype -- 4.2 Evaluation -- 5 Conclusions -- References.

Endowing Intelligent Vehicles with the Ability to Learn User's Habits and Preferences with Machine Learning Methods -- 1 Introduction -- 2 Overview of Applied Techniques -- 2.1 Clustering Approaches for Point of Interest (POI) Extraction -- 2.2 Artificial Neural Networks -- 2.3 Regressions -- 3 Methodology -- 3.1 Predicting the Next Vehicle Trip State -- 3.2 Predicting the Comfort Setting -- 4 Results -- 4.1 Datasets -- 4.2 Next Trip State of a Vehicle -- 4.3 Next Trip's Comfort Setting -- 5 Conclusion -- References -- Duplication Scheduling with Bottom-Up Top-Down Recursive Neural Network -- 1 Introduction -- 2 Preliminaries -- 2.1 Recursive Neural Network -- 2.2 Bottom-Up Top-Down Recursive Neural Network -- 3 Experiments -- 4 Results and Performance Comparison -- 5 Conclusion -- References -- Towards a Low-Cost Companion Robot for Helping Elderly Well-Being -- 1 Introduction -- 2 System Description -- 2.1 Hardware Description -- 2.2 Software Description -- 3 Conclusions and Future Works -- References -- Zero-Shot Knowledge Graph Completion for Recommendation System -- 1 Introduction -- 2 Related Work -- 3 Our Approach -- 3.1 Framework -- 3.2 Problem Formulation -- 3.3 Zero-Shot KGC -- 4 Experiments -- 4.1 Dataset -- 4.2 Data Pre-processing -- 4.3 Experimental Setup -- 4.4 Experiments Result and Comparisons -- 5 Conclusion and Future Work -- References -- The Covid-19 Influence on the Desire to Stay at Home: A Big Data Architecture -- 1 Introduction -- 2 State of the Art -- 3 Materials and Methods -- 3.1 Sources and Data Collection -- 3.2 Storage -- 3.3 ETL Process -- 3.4 Data Visualization -- 4 Results and Discussion -- 4.1 Use Case 1: United States of America -- 4.2 Use Case 2: India -- 4.3 Use Case 3: Brazil -- 5 Conclusions -- References -- Distance-Based Delays in Echo State Networks -- 1 Introduction -- 2 Methods -- 3 Results -- 4 Conclusion.

5 Future Work -- References -- EduBot: A Proof-of-Concept for a High School Motivational Agent -- 1 Introduction -- 2 State of the Art -- 3 Dataset Presentation -- 4 An Active Motivational Digital Assistant -- 4.1 Education Data Mining -- 4.2 Education Intelligence Module -- 4.3 Digital Assistant Motivational Module -- 5 Conclusion -- References -- A Simulation Model for Predicting the Spread of COVID-19 Virus -- 1 Introduction -- 2 Methods -- 3 Results -- 4 Conclusions -- References -- ICU Mortality Prediction Using Long Short-Term Memory Networks -- 1 Introduction -- 2 Related Works -- 3 Dataset -- 3.1 Feature Engineering -- 3.2 Feature Preprocessing -- 4 Methodology -- 4.1 Model Configuration -- 4.2 Model Implementation -- 5 Experimental Results -- 6 Conclusion and Future Works -- References -- Intelligent Learning Rate Distribution to Reduce Catastrophic Forgetting in Transformers -- 1 Introduction -- 2 Related Work -- 3 Proposed Approach -- 3.1 Search Space -- 3.2 Combining Learning Rate Distributions -- 4 Experimental Approach -- 4.1 Datasets -- 4.2 Types of Data Shift -- 4.3 Baselines and Implementation Details -- 5 Results -- 5.1 Dataset Shift -- 5.2 Distribution Shift -- 6 Conclusion -- References -- How Image Retrieval and Matching Can Improve Object Localisation on Offshore Platforms -- 1 Introduction -- 2 Related Work -- 3 ARRANGE: ImAge RetRieval mAtchiNG ObjEct -- 3.1 Principle -- 3.2 Image Retrieval -- 3.3 Image Matching -- 4 Performance Evaluation

-- 4.1 ARRANGE`s Analysis -- 4.2 ARRANGE Vs. State-of.the-art
Object Localisation Algorithms -- 5 Conclusion -- References --
Ethereum Investment Based on LSTM and GRU Forecast -- 1
Introduction -- 2 Materials: Data and Pre-processing -- 2.1 Feature
Selection -- 3 Methods: Neural Networks Application -- 3.1 Network
Architecture and Parametrization -- 3.2 Metrics.
3.3 Training and Testing Data.
