

1. Record Nr.	UNINA9910865259903321
Autore	Mercier-Laurent Eunika
Titolo	Artificial Intelligence for Knowledge Management, Energy and Sustainability : 10th IFIP International Workshop on Artificial Intelligence for Knowledge Management, AI4KMES 2023, Krakow, Poland, September 30-October 1, 2023, Revised Selected Papers
Pubbl/distr/stampa	Cham : , : Springer, , 2024 ©2024
ISBN	9783031610691 9783031610684
Edizione	[1st ed.]
Descrizione fisica	1 online resource (0 pages)
Collana	IFIP Advances in Information and Communication Technology Series ; ; v.693
Altri autori (Persone)	KayakutluGülgün OwocMieczyslaw Lech WahidAbdul MasonKarl
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Organization -- Contents -- Artificial Intelligence, Sustainability and Climate Change -- 1 Introduction - Sustainability and Climate Change -- 2 Contribution of AI to Climate Action -- 2.1 Environmental Impact of Generative AI -- 3 Conclusion and Future Work -- References -- In Search for Model-Driven eXplainable Artificial Intelligence -- 1 Introduction -- 2 XAI: State-of-the-Art -- 3 XAI: Critical Evaluation -- 4 Motivation for Model-Driven XAI -- 5 A Generic Scenario: Singular Case Analysis -- 6 A Note on Grammatical Evolution, Ongoing Research and Tools -- 7 An Experiment with Different Explainability Methods -- 7.1 Introduction of Meaningful Intermediate Variables -- 8 Conclusions -- References -- An Intelligent Chatbot Based on Hybrid Approach Implementing Technical Knowledge to Support Maintenance and Training Activities at Electricity of France (EDF) -- 1 Introduction -- 2 An Air-Conditioner in the Electrical Room? -- 3 Produce New Documentation with Notes and Instructions

to Capitalize on Knowledge -- 4 How Did the Air Conditioner Come About? -- 5 How Do Discussions Feed the Dialoguer? -- 6 The Dialoguer and AI -- 6.1 AI Enables Dialogue -- 6.2 The Life of the Dialoguer -- 7 Conclusions -- References -- Supporting Food Computing with Ontologies and Artificial Intelligence Methods for Sustainability -- 1 Introduction -- 2 Combining AI with Food Ontologies for Sustainability -- 3 Selected Ontological Knowledge Sources -- 3.1 FoodOn -- 3.2 Wikidata -- 3.3 Other Ontologies and Knowledge Graphs -- 3.4 Comparison of ONS, FoodKG, SPO and FoodOn Ontologies -- 4 Ontological Reasoning in Food Domain -- 5 Integrating Existing Knowledge with Machine-Learned Information About Recipes -- 5.1 Named Entity Recognition from Culinary Recipes -- 5.2 Linking the Recognized Entities with Knowledge Bases. 5.3 Development of an Integrated Knowledge Graph -- 5.4 A Graph Knowledge Base for Nutrients and Recipes -- 6 Conclusions -- References -- The Use of Semantic Networks for the Categorization of Prosumers: Expanded Version -- 1 Introduction -- 2 Identification of the Scope of Publications -- 3 Method and Research Procedure -- 4 Research Results -- 5 Conclusions -- References -- Methods for Mitigating Gender Bias in Binary Classification Models - A Comparative Analysis -- 1 Introduction -- 2 Gender Bias in Machine Learning Models -- 3 Resampling -- 4 Fairlearn Overview -- 5 Comparative Analysis of Methods for Mitigating Gender Bias in Binary Classification Models -- 5.1 Experiment Overview -- 5.2 Baseline Model -- 5.3 Models Based on Resampled Data -- 5.4 ThresholdOptimizer Models -- 5.5 Comparative Analysis -- 5.6 Summary -- 6 Conclusions -- References -- ChatGPT as a Learning Tool in Business Education. Research on Students' Motivation -- 1 Introduction -- 2 Research Background -- 3 Research Methodology and Analysis -- 4 Future Research Directions and Conclusions -- References -- Integrating Artificial Intelligence into Electric Vehicle Energy Systems: A Survey -- 1 Introduction -- 2 Electric Vehicles -- 2.1 Overview -- 2.2 Transport and Climate Change -- 2.3 Batteries -- 2.4 Grid -- 2.5 Challenges -- 3 Life-Cycle of Electric Vehicles -- 3.1 Life-Cycle Assessment -- 3.2 Life Cycle Emissions -- 4 Artificial Intelligence -- 4.1 Overview -- 4.2 Machine Learning -- 4.3 Reinforcement Learning -- 4.4 Neural Networks and Deep Learning -- 4.5 Multi-agent Systems -- 5 Applications of Artificial Intelligence to Electric Vehicles -- 5.1 Electric Vehicle Producers -- 5.2 End Users -- 5.3 Power System Operators -- 5.4 Owners of EV Charging Infrastructure -- 5.5 Policy Makers -- 5.6 Vehicle-to-Grid Planners -- 6 Discussion -- 6.1 Limitations. 6.2 Future Directions -- 7 Conclusion -- References -- Towards Sustainable Power Systems: Exploring the Opportunities of Multi-task Learning for Battery Degradation Forecasting -- 1 Introduction -- 2 Problem Setting -- 2.1 Multi-task Learning -- 2.2 Multi-task Sequence-to-Sequence Models -- 2.3 Task Weighting -- 2.4 Research Gap -- 3 Battery Degradation Data -- 3.1 Data Preprocessing -- 4 Empirical Setup -- 4.1 The Encoder-Decoder Multi-task Model -- 4.2 Exploration Space -- 4.3 Loss Function and Evaluation Metrics -- 5 Results -- 5.1 Comparing Single-Stage with Three-Stage Training -- 5.2 Analyzing Static Task Weighting -- 5.3 Comparing Dynamic Task Weighting Algorithms -- 6 Conclusion -- References -- Classification Tree Based AI System for Short Term Prediction for Heat and Power Plants -- 1 Introduction -- 2 Literature Remarks -- 3 Method -- 4 Temperature of Return Water from Heat and Power Plant -- 5 Demand for Electricity at a Given Area -- 6 Conclusions -- References -- The Influence of Neural Networks on Hydropower Plant Management in

Agriculture: Addressing Challenges and Exploring Untapped Opportunities -- 1 Introduction -- 2 Hydropower Plant Management -- 2.1 Constrained Optimisation Approach -- 2.2 Neural Networks Approach -- 3 The Proposal -- 3.1 The Agriculture Conscious Hydropower Plant Management Framework -- 3.2 Software Regulation -- 4 Conclusion and Future Work -- References -- Usability of Honeybee Algorithms in Practice. Towards Nature-Inspired Sustainable Development -- 1 Introduction -- 2 Research Background and Methodology -- 3 Fundamentals of Honeybee Algorithms -- 4 Chosen Artificial Bee Colony Algorithms in Practice -- 5 Conclusions and Future Research Directions -- References -- Automatic Coral Morphotypes Detection with YOLO: A Deep Learning Approach for Efficient and Accurate Coral Reef Monitoring -- 1 Introduction. 2 Related Works -- 3 Datasets -- 4 YOLOv5 -- 5 Results and Analysis -- 6 Discussion -- 7 Conclusion -- References -- Answering Key Questions About Air Pollution Dynamics in Ho Chi Minh City: A Spatiotemporal Analysis Using the XAI-SHAP Clustering Approach -- 1 Introduction -- 2 Related Work -- 2.1 Traditional Methods for Forecasting Air Quality -- 2.2 AI-Based Models for Forecasting Air Pollutants -- 2.3 Interpreting Models with XAI - SHAP Approach -- 2.4 SHAP Applications in Environmental Research -- 3 Experiments -- 3.1 Dataset and Experimental Settings -- 3.2 Constructing and Assessing ML Classification Models -- 3.3 Evaluating Feature Significance -- 3.4 SHAP-Based Dimensionality Reduction -- 4 Ablation Studies -- 4.1 Hourly Fluctuations of Air Pollutant Levels Across Different Monitoring Stations -- 4.2 Assessing Critical Factors and Ranking Their Impact on Air Pollution Concentrations -- 4.3 Assessing the Viability of Supervised Clustering with SHAP Values -- 5 Conclusion -- References -- Crowdsourcing as a Tool for Smart City Within Sustainable Development -- 1 Introduction -- 2 Materials and Methods -- 3 Results -- 4 Discussion -- 5 Conclusions -- References -- Model of Relationship Between Circular Economy and Industry 5.0 -- 1 Introduction -- 2 Theoretical Background -- 3 Materials and Methods -- 4 Model of the CE and Industry 5.0 Relationship -- 5 Conclusions -- Appendix -- References -- Reduction of Carbon Dioxide Emissions of IT Hardware -- 1 Introduction -- 2 Theoretical Background -- 2.1 Sustainable Development -- 3 Research Methodology -- 3.1 Research Tools -- 3.2 Research Procedure -- 4 Empirical Results and Discussion -- 4.1 Results -- 5 Conclusion -- References -- Author Index.

---