

# Special Issue

## Sustainable Applications for Machine Learning

### Message from the Guest Editors

This Special Issue aims to collate the latest findings on the challenges and state-of-the-art solutions in the sustainability of ML as well as its applications. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but not limited to) the following:

- Dependability of machine learning models;
- Acceleration of deep neural networks;
- Privacy-preserving aspects of machine learning;
- Reliability assessment of deep learning systems;
- Multi-agent systems in reinforcement learning;
- Privacy concerns in federated learning approaches;
- Artificial neural network applications in a circular economy;
- Sustainability of natural language processing models;
- Optimization in machine learning;
- Recommender systems;
- Graph neural network analysis;
- Reliability in ensemble learning;
- Security aspects of generative models;
- Ethical issues with AI/ML;
- Machine learning applications in healthcare;
- Computer vision applications in smart cities;
- Machine learning for business continuity;
- Machine learning for sustainable supply chains;
- The role of ML/DL in Industry 4.0.

We look forward to receiving your contributions.

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### Guest Editors

Dr. Danial Javaheri

Prof. Dr. Hassan Chizari

Prof. Dr. Amir Masoud Rahmani



## Machine Learning and Knowledge Extraction

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an Open Access Journal  
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### Deadline for manuscript submissions

closed (2 July 2025)



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## About the Journal

### Message from the Editor-in-Chief

Machine learning deals with understanding intelligence to design algorithms that can learn from data, gain knowledge from experience and improve their learning behaviour over time. The challenge is to extract relevant structural and/or temporal patterns (“knowledge”) from data, which is often hidden in high dimensional spaces, thus not accessible to humans. Many application domains, e.g., smart health, smart factory, etc. affect our daily life, e.g., recommender systems, speech recognition, autonomous driving, etc. The grand challenge is to understand the context in the real-world under uncertainty. Probabilistic inference can be of great help here as the inverse probability allows to learn from data, to infer unknowns, and to make predictions to support decision making.

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### Editor-in-Chief

Prof. Dr. Andreas Holzinger

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