

Special Issue

New Advances in Machine Learning and Optimization for Digital Transformation

Message from the Guest Editors

Machine learning (ML), a branch of artificial intelligence, focuses on the development of algorithms that facilitate learning from data for decision-making. Optimization offers fundamental techniques for building mathematical models and is crucial for fine-tuning the parameters of ML algorithms. Both disciplines have a strong influence on the digital transformation process in organizations, such as process automation and real-time operation optimization. The digitalization of organizations requires the implementation of advanced technologies such as big data analysis, machine learning, artificial intelligence, the Internet of Things (IoT), and recently, the integration of quantum computing for the integration of innovative solutions in various sectors for decision-making based on robust evidence. Topics of interest include, but are not limited to, the following: Optimization algorithms for ML; ML methods for optimization; Industry and healthcare applications; Data-driven optimization techniques; Digital twin development; Large-scale optimization; Quantum optimization algorithms; Quantum ML.

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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