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Machine Learning for Industry 4.0: From Manufacturing and Embedded Systems to Cloud Computing and Data Centers

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Deadline for manuscript submissions:
closed (31 May 2022)

Message from the Guest Editors

This review of the current state-of-the-art is not intended to make an exhaustive exploration of all of the existing works, but rather aims at providing an overview of the research targeting Machine Learning applied to Industry 4.0, bringing out the high level of activity of this area.

- Digital twins for manufacturing
- ML/DL applications for predictive/prescriptive maintenance
- ML/DL models for anomaly detection and fault detection in data centers and HPC systems
- On-edge inference of DL models for Industry 4.0
- ML/DL models for root cause analysis
- Explainable ML/DL models for Industry 4.0
- Combining data-driven models and domain knowledge for predictive maintenance
- Transfer learning approaches in Industry 4.0 and predictive maintenance
- ML model implementations, deployment, and validation on real industrial and HPC systems
- Deploying ML/DL models on IoT devices with severe power constraints
- Static and dynamic mapping of ML/DL components at different levels of the IoT

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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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