AI and Machine Learning Applications in Industrial Automation

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Message from the Guest Editors

Dear Colleagues,

This Special Issue aims at analyzing relevant industrial demands for AI and machine learning applications. The chosen focus is providing the state of the art and trends and understanding the main research challenges in AI and machine learning tools applied to industrial automation systems. The topics include but are not limited to industrial applications of deep learning and artificial neural networks, expert systems, fuzzy and neuro-fuzzy systems, genetic algorithms, multi-agent systems, bio-inspired algorithms, and hybrid approaches. Application examples to industrial processes include intelligent manufacturing systems, intelligent control systems, intelligent machines and robots, AI in cybersecurity, AI for predictive maintenance, smart sensors and sensing technology, AI-based condition monitoring, IoT-enabled smart systems, and intelligent signal processing and data analyses.

Keywords:

- industrial automation
- artificial intelligence
- machine learning
- adaptive production systems
- bio-inspired algorithms

Special Issue

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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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