

Special Issue

AI/ML-Powered Intelligent IoT Systems with Smart Sensors for Next-Generation Edge Computing

Message from the Guest Editors

Recent advances in edge-native AI and machine learning (ML) have empowered IoT systems with intelligence, low latency, efficiency, and collaborative resource orchestration. The rapid adoption of AI/ML and next-generation edge computing is transforming IoT deployment and management. As IoT networks grow in scale and complexity in dynamic, resource-constrained environments, intelligent, autonomous, adaptive frameworks for IoT resource management are urgently needed. Current research aims to shift IoT systems from reactive operation toward predictive, self-optimizing, resilient behavior. IoT should support real-time anomaly detection, intelligent traffic management, proactive fault diagnosis, and efficient resource utilization. Combined with edge computing, these methods bring intelligence closer to data sources, reducing latency, improving scalability, and enhancing privacy and reliability. In the future, AI/ML-driven edge-enabled IoT will play a key role in smart cities, healthcare, transportation, and other emerging applications. This Special Issue welcomes innovative research on intelligent IoT systems empowered by AI/ML and next-generation edge computing.

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