Special Issue

Al-Driven Security and Privacy for IIoT Applications

Message from the Guest Editor

We invite contributions that address both Al's vulnerabilities in IIoT environments and its potential to fortify these environments against evolving cyber threats, with a focus on overcoming the data scarcity challenges inherent in IIoT security. The topics of interest include, but are not limited to, the following:

- Few-shot learning for efficient IIoT intrusion detection;
- Zero-shot learning for novel threat detection in IIoT;
- Al-driven methods for anomaly detection and threat mitigation in IIoT networks;
- Adversarial machine learning attacks and defenses in IIoT systems;
- Addressing IIoT security data scarcity using few/zeroshot learning techniques;
- Comparative analysis of few/zero-shot learning versus traditional machine learning and deep learning in IIoT;
- Developing novel few/zero-shot learning models for IoT environments with limited data and novel threats;
- Robustness and resistance of AI models against random and adversarial perturbations in IIoT networks;
- Federated learning and other privacy-preserving AI techniques for IIoT data processing;
- Al-driven security solutions in smart cities, healthcare IoT, industrial IIoT, and other domains.

Guest Editor

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Deadline for manuscript submissions

closed (30 August 2025)



Sensors

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Editor-in-Chief

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