Cognitive Internet of Things (IoT) is a promising technology that enables intelligent data collection and processing on top of IoT infrastructures and supports various IoT applications. The emergence of cognitive power from IoT devices provides new research opportunities on devising intelligent machine learning and data mining methods and on designing efficient and secure computation schemes. In addition to the deployment of machine intelligence associated with IoT, this special issue also focuses on machine intelligence in the adversarial setting—cyber security. The enhanced capability of cognitive IoT may incur new threats due to emerging vulnerabilities and exploits. Consequently, joint consideration of the interweaving nature between machine intelligence and cyber security is a key factor for driving cognitive IoT.

This special issue aims to bring together researchers and practitioners to foster cutting-edge technologies, novel researches, and tutorial overviews on topics related to machine intelligence and cyber security for cognitive IoT.

Potential topics include but are not limited to the following:

- Machine learning and artificial intelligence for cognitive IoT
- Security vulnerabilities, exploits, solutions, and adversarial learning for cognitive IoT
- Distributed, cloud, edge, and fog computing for cognitive IoT
- Big data technology for cognitive IoT
- Cognitive radio technology for cognitive IoT
- Multisensor/multiagent networks for cognitive IoT
- Integration of cognitive IoT and wireless infrastructures
- Novel applications and demonstrations by cognitive IoT

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