

CALL FOR BOOK CHAPTER

Blockchain and Digital Twin Enabled IoT Networks: Privacy and Security Perspectives



Important Deadlines

Abstract Submission (Approximately 150-200 words)

25th January 2023

Abstract Acceptance

15th February 2023

Submission of Full Chapter

25th April 2023

Camera ready submission

25th May 2023

Scope of the Book

The book aims to systematically collect and present quality research work in recent trends in Blockchain and Digital Twin based IoT data analytics approaches for providing the privacy and security solutions for Fog-enabled Internet of Things (IoT) network. Due to large number of deployments of IoT devices, IoT is main source of data and a very high volume of sensing data is generated by IoT systems such as smart cities and smart grid applications. To provide a fast and efficient data analytics solution for Fog-enabled IoT system is a very fundamental research issue. For the deployment of the Fog-enabled-IoT system in different applications such as Healthcare system, Smart cities and smart grid system, security, and privacy of big IoT data and IoT network are key issues. The current centralized IoT architecture is heavily restricted with various challenges such as single point of failure, data privacy, security, robustness, etc. Thus, this book would emphasize and facilitate a greater understanding of various security and privacy approaches using the advances in Digital Twin and Blockchain for data analysis using machine/deep learning, federated learning, edge computing and the countermeasures to overcome these vulnerabilities. **Recommended topics for the book are mentioned below.**

- Blockchain data analytics in detection of anomalies in IoT Networks
- Blockchain and Digital Twin analytics in detection of cyber-attacks IoT Networks
- Machine learning or deep learning-based security solutions for intelligent Cyber-Physical Systems (CPS) and IoT.
- Secure and trustworthy Cloud, fog, and edge computing for intelligent CPS and IoT.
- The new architecture of IoT with edge and blockchain.
- Blockchain and Digital Twin Analytics based IoT ecosystem and its applications, e.g., finance, healthcare, energy, supply chain, entertainment, etc.
- Security and privacy of blockchain-based IoT.
- Blockchain and Machine Learning based data analytics in Edge artificial intelligence solutions in IoT.
- Detection, evaluation, and prevention of threats and attacks in intelligent CPS and IoT.
- Ambient intelligence architectures and model for IoT.
- Software defined networking for IoT.
- Blockchain data analytics-based privacy-preserving techniques in IoT.
- Blockchain and Digital Twin based IoT system with applications such as Smart Agriculture, Water resource management, etc.

Note: - Topics are not limited to mention above.

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