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| Collana                 | Digital Privacy and Security, , 2731-9938  |
| Altri autori (Persone)  | TangXiangyun<br>WangWei<br>ZhuLiehuang   |
| Disciplina              | 005.8<br>323.448   |
| Soggetti                | Data protection - Law and legislation<br>Computer networks - Security measures<br>Blockchains (Databases)<br>Privacy<br>Mobile and Network Security<br>Blockchain  |
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| Nota di contenuto       | Chapter 1. Introduction of Web 3.0 -- Chapter 2. Security and Privacy Defense Framework for Web 3.0 -- Chapter 3. Verifiable Privacy-preserving Federated Learning in Web 3.0 -- Chapter 4. Membership Privacy Protection for Federated Learning in Web 3.0 -- Chapter 5. Secure Mobile Device Authentication in Web 3.0 -- Chapter 6. User Behavior Identification via Traffic Analysis in Web 3.0 -- Chapter 7. Malicious Transaction Detection in Web 3.0 -- Chapter 8. Malicious Transaction Deanonymity in Web 3.0 -- Chapter 9. Conclusion and Future Direction. |
| Sommario/riassunto      | Web 3.0 is the next generation of the Internet built on decentralized technologies such as blockchain and cryptography. It is designed to address issues encountered in the previous generation of the Internet such as imbalanced distribution of interests, monopoly of platform resources, and leakage of personal privacy. This book explores the  |

challenges and solutions related to ensuring security and privacy in the context of the evolving Web 3.0 architecture. Web 3.0 represents the next generation of the web, characterized by decentralized networks, blockchain technology, and enhanced user control over data. As Web 3.0 evolves, the focus on addressing security and privacy concerns becomes increasingly crucial. This book provides a comprehensive understanding of the security and privacy issues specific to Web 3.0 and offers practical defense frameworks and methods to mitigate these challenges. This book is dedicated to the specific aspects of security and privacy in Web 3.0, from introducing the architecture and addressing the inherent issues to presenting innovative methods for privacy-preserving computing, user behavior identification, and abnormal transaction detection. It is of particular interest to researchers in the field of Web 3.0, blockchain, and network security, as it summarizes the security and privacy concerns in Web 3.0 and brings a number of innovative technologies and practical solutions to protect sensitive data and maintain user privacy in Web 3.0 environments, equipping researchers with the knowledge necessary to design secure and privacy-aware applications and systems in Web 3.0.

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