

TABLE OF CONTENTS

Chapter No.	Title	Page No.
1	Fundamentals of Cloud Computing Security	01-15
	1.1 Cloud computing models (IaaS, PaaS, SaaS)	
	1.2 Virtualization and container security	
	1.3 Threat models in cloud environments	
	1.4 Identity and Access Management (IAM)	
	1.5 Data security, encryption, and key management	
2	Blockchain Technology and Security	16-32
	2.1 Blockchain architecture and consensus mechanisms	
	2.2 Cryptographic primitives (hashing, digital signatures)	
	2.3 Smart contracts and vulnerabilities	
	2.4 Security attacks (51% attack, double spending, Sybil attack)	
	2.5 Privacy-preserving blockchain techniques	
3	Artificial Intelligence for Cybersecurity	33-46
	3.1 Overview of AI/ML in security	
	3.2 Supervised vs unsupervised learning for threat detection	
	3.3 Deep learning for anomaly detection	
	3.4 Reinforcement learning in adaptive security systems	
	3.5 AI-based malware detection and phishing detection	
4	AI-Driven Cloud Security	47-61
	4.1 AI-based intrusion detection systems (IDS)	
	4.2 Behavior analytics and user profiling	
	4.3 Threat intelligence using AI	
	4.4 Automated incident response systems	
	4.5 Security orchestration and automation	
5	AI in Blockchain Security	62-76
	5.1 Fraud detection in blockchain transactions	
	5.2 Smart contract vulnerability prediction	
	5.3 AI for consensus optimization	
	5.4 Blockchain analytics using machine learning	
	5.5 Detecting anomalous crypto transactions	

6	Integrated Cloud-Blockchain Security Framework	77-91
	6.1 Hybrid architectures (cloud + blockchain + AI)	
	6.2 Secure data sharing using blockchain in cloud	
	6.3 Decentralized identity management	
	6.4 Edge computing and secure distributed AI	
	6.5 Zero-trust architecture	
7	Advanced Topics	92-108
	7.1 Privacy-enhancing technologies (Federated Learning, Homomorphic Encryption)	
	7.2 Secure multi-party computation	
	7.3 Adversarial AI attacks and defenses	
	7.4 Quantum computing impact on security	
	7.5 Explainable AI (XAI) in Security	
8	Intelligent Security Operations and Automation	109-124
	8.1 Security Operations Center (SOC) Evolution	
	8.2 AI-Powered Threat Intelligence	
	8.3 Security Information and Event Management (SIEM)	
	8.4 Security Orchestration, Automation, and Response (SOAR)	
	8.5 User and Entity Behavior Analytics (UEBA)	
9	Regulatory, Ethical, and Governance Frameworks	125-138
	9.1 Cybersecurity Regulations and Standards	
	9.2 Governance in Cloud and Blockchain Security	
	9.3 Ethical Issues in AI Security	
	9.4 Privacy and Data Protection	
10	Industry Applications and Future Directions	139-164
	10.1 AI-Driven Security in Financial Systems	
	10.2 Healthcare Security Systems	
	10.3 Smart Cities and IoT Security	
	10.4 Supply Chain Security	
	10.5 Industrial and Critical Infrastructure Security	
	10.6 Future Directions in AI-Driven Cloud and Blockchain Security	
	10.7 Research Challenges and Open Problems in AI-Driven Cloud and Blockchain Security	