

AI-driven Cyber Risk Management

Editors:

Hooman Razavi, Tecnologico de Monterrey, Monterrey, Mexico

Muriel Figueredo Franco, Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, Brazil

Mariya Ouaisa, Cadi Ayyad University, Marrakech, Morocco

Mariyam Ouaisa, Chouaib Doukkali University, El Jadida, Morocco

Gautam Srivastava, Brandon University, Brandon, Canada

AI-driven Cyber Risk Management explores cutting-edge AI applications in cybersecurity, covering threat detection, fraud prevention, and risk quantification. The book examines machine learning, big data analytics, XAI, and blockchain integration for resilient defense. It includes case studies on AI-powered penetration testing, zero-shot threat intelligence, and dynamic C&C mitigation. This book is essential for cybersecurity professionals, risk analysts, and AI researchers tackling next-gen cyber threats.

TABLE OF CONTENTS

- Foundations of Cyber Risk Management
- The Rise of AI and Risk Management
- The Future of Cyber Risk Management in an AI-driven World
- Artificial Intelligence in Cyber Risk Management: Revolutionizing Threat Detection and Resilience
- AI for Threat Detection and Intelligence
- Empowering Cybersecurity with AI: Advanced Threat Detection, Predictive Intelligence, and Real-time Defense
- AI-powered Risk Mitigation and Intelligent Incident Response in Cybersecurity
- Challenges in Cyber Risk Analysis Using Big Data and AI Models
- Rising Impact of AI in Cyber Risk Management in the Context of Small- and Medium-sized Enterprises
- Toward Resilient Cyber Defense: Integrating AI and Blockchain for Smart Risk Management
- Advanced Approaches to Fraud Detection and Financial Risk Mitigation Using Intelligent Analytics
- XAI-driven Approaches to Detect Financial Frauds and Mitigate Risk
- MIND-SHIELD: A Multi-Intelligence Deep Learning Framework for Hierarchical Threat Detection and Zero-shot Situational Intelligence Process
- Integrating AI into Cybersecurity Infrastructure: A Case Study on Dynamic C&C Server Architecture (PhantomNet)
- Automating Cybersecurity Risk Assessments with a Modern Penetration Testing Approach (PenTest Pro)

AI-DRIVEN CYBER RISK MANAGEMENT



Editors:

Hooman Razavi

Muriel Figueredo Franco

Mariya Ouaisa

Mariyam Ouaisa

Gautam Srivastava

River Publishers Series in Digital Security and Forensics

ISBN: 9788743808060

e-ISBN: 9788743808053

Available From: March 2026

Price: \$ 150.00

KEYWORDS:

Artificial intelligence, applied machine learning, big data, cyber risk management, cyber intelligence.

