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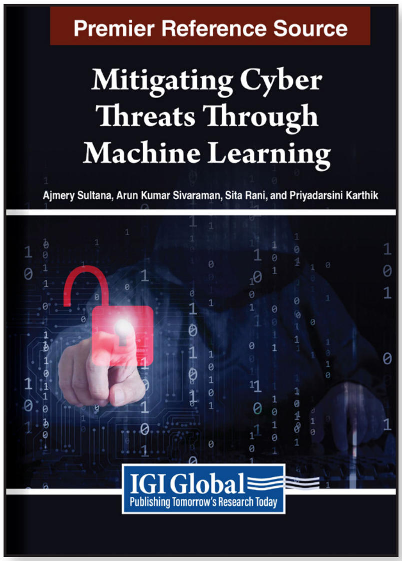
Mitigating Cyber Threats Through Machine Learning

Part of the Advances in Computational Intelligence and Robotics Book Series

Ajmery Sultana (Algoma University, Canada), Arun Kumar Sivaraman (Photon Interactive Inc., Canada), Sita Rani (Guru Nanak Dev Engineering College, India) and Priyadarsini Karthik (SRM Institute of Science and Technology, India)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Mitigating Cyber Threats Through Machine Learning
Ajmery Sultana, Arun Kumar Sivaraman, Sita Rani, and Priyadarsini Karthik
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Description:

In today's digital landscape, cyber threats are becoming increasingly sophisticated, challenging traditional cybersecurity measures. Organizations face the daunting task of protecting their systems and data from cyber attacks that can result in financial loss, reputational damage, and even compromise of sensitive information. While effective to a certain extent, traditional cybersecurity approaches are often reactive and need help keeping up with the dynamic nature of modern threats.

Mitigating Cyber Threats Through Machine Learning offers a comprehensive solution by exploring the integration of machine learning to fortify and enhance cybersecurity measures. It provides a solid foundation in machine learning principles relevant to cybersecurity, showcasing innovative real-world applications and addressing ethical considerations associated with its implementation. By delving into intrusion detection systems, anomaly detection, malware detection, and phishing identification, the book equips cybersecurity professionals, researchers, and students with the knowledge and tools necessary to enhance digital defenses against evolving cyber threats.

This book aims to advance the field and empower readers to adopt responsible and privacy-conscious approaches by providing insights into the practical applications and challenges of integrating machine learning into cybersecurity. It benefits cybersecurity professionals seeking to enhance digital defenses and researchers and academics interested in staying abreast of the latest developments. Ultimately, **Mitigating Cyber Threats Through Machine Learning** is a valuable resource for understanding the intersection of machine learning and cybersecurity, offering practical solutions to address the evolving landscape of cyber threats.

ISBN: 9798369331163 **Pages:** 310 **Copyright:** 2024 **Release Date:** June, 2024

Hardcover: $315.00 **E-Book:** $315.00 **Hardcover + E-Book:** $380.00

Topics Covered:

- Advanced Machine Learning Techniques
- Adversarial Attacks
- Anomaly Detection
- Behavioral Analysis
- Deep Learning
- Ethical Considerations
- Federated Learning
- Imbalanced Datasets
- Intrusion Detection Systems (IDS)
- Machine Learning Algorithms
- Malware Detection
- Phishing Identification
- Privacy Concerns
- Robustness of Machine Learning Models
- Trustworthiness of Machine Learning Models

Subject: Security & Forensics

Classification: Edited Reference

Readership Level: Advanced-Academic Level (Research Recommended)

Research Suitable for: Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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