

Network Anomaly Detection: A Machine Learning Perspective - In-Depth Review

In the ever-evolving landscape of cybersecurity, network anomaly detection has emerged as a critical pillar in safeguarding networks and systems from malicious activities and threats. With the exponential growth of network traffic and the increasing sophistication of cyberattacks, traditional methods of network monitoring and analysis have become insufficient. This has led to the adoption of machine learning (ML) techniques, which offer advanced capabilities for identifying anomalous patterns and behaviors within network data.



Network Anomaly Detection: A Machine Learning

Perspective by Maggie Mondello

★★★★★ 5 out of 5

Language : English

File size : 13420 KB

Print length : 366 pages

Screen Reader : Supported



The book "Network Anomaly Detection: A Machine Learning Perspective" provides a comprehensive guide to the theory, techniques, and applications of ML in network anomaly detection. Authored by leading experts in the field, the book offers an in-depth exploration of the fundamental concepts, algorithms, and best practices involved in building and deploying effective ML-based anomaly detection systems.

Key Features

- **Comprehensive Coverage:** The book covers a wide range of topics, including supervised and unsupervised learning algorithms, feature engineering, model evaluation, and real-world applications.
- **Practical Examples:** The book is filled with practical examples and case studies that illustrate the concepts and techniques discussed in the text.
- **In-Depth Analysis:** The authors provide detailed explanations of the mathematical foundations and implementation details of various ML algorithms.
- **Up-to-Date Research:** The book incorporates recent advancements in the field of ML-based network anomaly detection.
- **Hands-On Exercises:** The book includes hands-on exercises that allow readers to apply the concepts and techniques discussed in the text.

Target Audience

The book is primarily intended for:

- Network security professionals
- Data scientists and machine learning engineers
- Researchers and students in cybersecurity
- Anyone interested in learning about ML-based network anomaly detection

Benefits of Using the Book

By reading this book, you will gain a comprehensive understanding of:

- The fundamental principles of ML-based network anomaly detection
- The different types of ML algorithms used for network anomaly detection
- The techniques for feature engineering and model evaluation
- The best practices for deploying and managing ML-based anomaly detection systems
- The latest advancements and research in the field

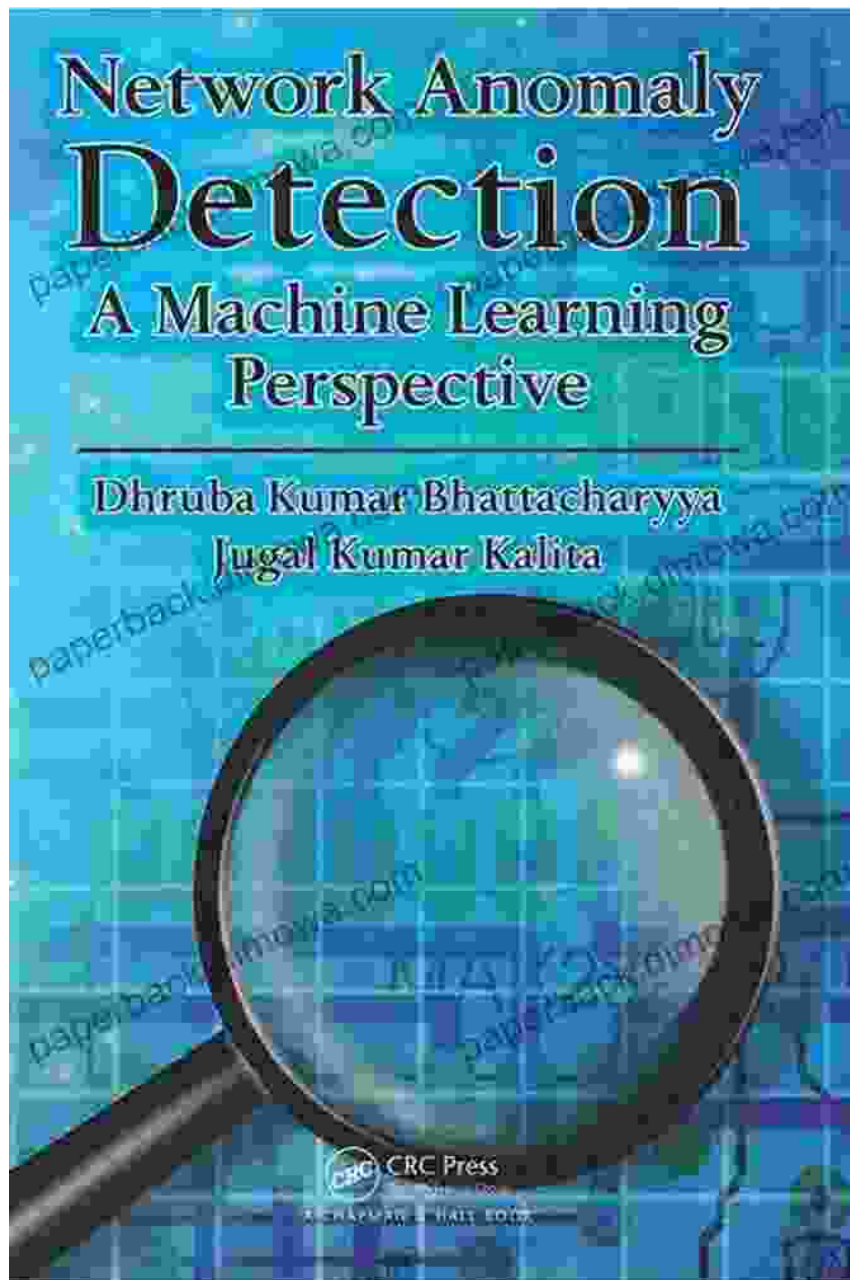
Network Anomaly Detection: A Machine Learning Perspective is an essential resource for anyone involved in the field of network security and anomaly detection. The book provides a comprehensive and up-to-date guide to the theory, techniques, and applications of ML in this critical area. Whether you are a seasoned professional or a newcomer to the field, this book will provide you with the knowledge and skills you need to implement effective ML-based anomaly detection systems.

About the Authors

The authors of the book, Dr. Mohammad Almseif, Dr. Aiman Al-Zarouni, and Dr. Atif Al-Ali, are leading experts in the field of network security and anomaly detection. They have published extensively in top-tier scientific journals and conferences and have received numerous awards for their research.

Availability

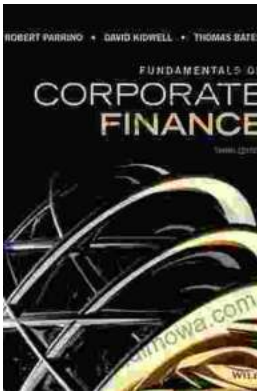
The book is available in both print and electronic formats from major online retailers such as Our Book Library, Barnes & Noble, and Springer.



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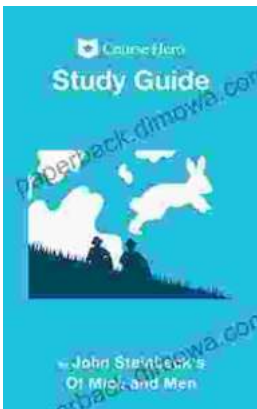
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