

1. Record Nr.	UNINA9910799931803321
Titolo	Machine learning for computer and cyber security : principles, algorithms, and practices // editors, Brij B. Gupta, Michael Sheng
Pubbl/distr/stampa	Boca Raton : , : CRC Press, , [2019] ©2019
ISBN	0-429-99572-5 0-429-50404-7 0-429-99571-7
Descrizione fisica	1 online resource (365 pages)
Disciplina	006.3/1
Soggetti	Computer networks - Security measures - Data processing Computer security - Data processing Machine learning Artificial intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"A science publishers book."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Title Page; Copyright Page; Dedication; Foreword; Acknowledgement; Preface; Table of Contents; 1: A Deep Learning-based System for Network Cyber Threat Detection; 2: Machine Learning for Phishing Detection and Mitigation; 3: Next Generation Adaptable Opportunistic Sensing-based Wireless Sensor Networks: A Machine Learning Perspective; 4: A Bio-inspired Approach to Cyber Security; 5: Applications of a Model to Evaluate and Utilize Users' Interactions in Online Social Networks; 6: A Deep-dive on Machine Learning for Cyber Security Use Cases 7: A Prototype Method to Discover Malwares in Android-based Smartphones through System Calls 8: Metaheuristic Algorithms-based Feature Selection Approach for Intrusion Detection; 9: A Taxonomy of Bitcoin Security Issues and Defense Mechanisms; 10: Early Detection and Prediction of Lung Cancer using Machine-learning Algorithms Applied on a Secure Healthcare Data-system Architecture; 11: Preventing Black Hole Attack in AODV Routing Protocol using Dynamic Trust Handshake-based Malicious Behavior Detection

12: Detecting Controller Interlock-based Tax Evasion Groups in a Corporate Governance Network; 13: Defending Web Applications against JavaScript Worms on Core Network of Cloud Platforms; 14: Importance of Providing Incentives and Economic Solutions in IT Security; 15: Teaching Johnny to Thwart Phishing Attacks: Incorporating the Role of Self-efficacy into a Game Application; Index

Sommario/riassunto

While Computer Security is a broader term which incorporates technologies, protocols, standards and policies to ensure the security of the computing systems including the computer hardware, software and the information stored in it, Cyber Security is a specific, growing field to protect computer networks (offline and online) from unauthorized access, botnets, phishing scams, etc. Machine learning is a branch of Computer Science which enables computing machines to adopt new behaviors on the basis of observable and verifiable data and information. It can be applied to ensure the security of the computers and the information by detecting anomalies using data mining and other such techniques. This book will be an invaluable resource to understand the importance of machine learning and data mining in establishing computer and cyber security. It emphasizes important security aspects associated with computer and cyber security along with the analysis of machine learning and data mining based solutions. The book also highlights the future research domains in which these solutions can be applied. Furthermore, it caters to the needs of IT professionals, researchers, faculty members, scientists, graduate students, research scholars and software developers who seek to carry out research and develop combating solutions in the area of cyber security using machine learning based approaches. It is an extensive source of information for the readers belonging to the field of Computer Science and Engineering, and Cyber Security professionals. Key Features: This book contains examples and illustrations to demonstrate the principles, algorithms, challenges and applications of machine learning and data mining for computer and cyber security. It showcases important security aspects and current trends in the field. It provides an insight of the future research directions in the field. Contents of this book help to prepare the students for exercising better defense in terms of understanding the motivation of the attackers and how to deal with and mitigate the situation using machine learning based approaches in better manner.
