CALL FOR BOOK CHAPTERS

Book Title: Quantum Algorithms for Enhancing Cybersecurity in Computational Intelligence in Healthcare

Scopus Indexed

Scope of the Book

Quantum computing has the potential to significantly improve machine learning algorithms used in cybersecurity by enabling the efficient processing of vast datasets and complex patterns, far surpassing the capabilities of classical computers. Quantum Machine Learning (QML) can be employed to swiftly detect and respond to cyber threats in real time by identifying anomalies within healthcare networks that may indicate a security breach. Through the adoption of QML, healthcare organizations can enhance their ability to identify and counteract advanced persistent threats (APTs) and other sophisticated cyber-attacks aimed at compromising patient data. The integration of quantum computing into cybersecurity is a pivotal focus of this book. As digital security becomes increasingly vital in our interconnected world, understanding the implications and potential of quantum cryptography, post-quantum cryptography, and secure communication is crucial. This book explores how quantum computing redefines encryption protocols, threat detection, and data protection strategies in the cyber domain. Moreover, it examines the diverse applications of quantum computing, emphasizing its transformative impact across various sectors, including pharmaceuticals, finance, materials science, and logistics. The revolutionary potential of quantum computing is set to transform AI solutions in healthcare and other industries. With the rapid evolution of quantum computing, new discoveries, algorithms, and applications are continually expanding our understanding and technological capabilities. This book serves as a collaborative platform for researchers from both academia and industry to share their latest insights and knowledge on quantum computing, with the unified objective of shaping the future of technology.

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Topics of Interest

The Book Chapters are invited but are not limited to the following topics:

- Quantum Machine Learning for Enhanced Cyber Defense.
- Healthcare Cybersecurity Using Quantum Computing
- Quantum Cryptography and Cybersecurity
- Quantum Computing-Based Cybersecurity Applications: Case Studies
- Quantum Artificial Intelligence for Cyber Threat Mitigation
- Quantum Computing in 5G communication and networks
- Quantum Optimization in Healthcare Security Solutions.
- Quantum Key Distribution (QKD) and Secure Communication.
- Logistic Management and Quantum-enhanced Security.
- Drug Development and Data Security Using Quantum Computing
- Quantum-Enhanced Threat Detection Systems for Healthcare Infrastructure

Important Dates

Manuscript Submission Deadline Date: 10 Dec 2024
Manuscript Acceptance Notification: 30 Dec 2024
First Round Review Report: 15 Jan 2025
Revised Chapter Submission: 10 Feb 2025
Final Decision Notification: 25 Mar 2025

Submission Guidelines

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