

Document type
Book Chapter

Source type
Book

ISBN
979-836935834-4, 979-836935832-0


DOI
10.4018/979-8-3693-5832-0.ch013

[View more](#)

Quantum Networks and Their Applications in AI • Pages 197 - 213 • 15 August 2024

Quantum-inspired optimization in ai for healthcare networks

Arya, Aayushi^a; Devadas, Mercy Sharon^b; Hyima Lakshmi T.V.^c; Yogeesh N.^d; Maaliw, Renato R.^e; Venkata Ramana K.^f

 Save all to author list

^a Woxsen University, India

^b Jeppiaar Institute of Technology, India

^c S.R.K.R. Engineering College, India

^d Government First Grade College, Tumkur, India

[View additional affiliations](#)

[Full text options](#) [Export](#)

Abstract

SciVal Topics




Abstract

Quantum mechanics-inspired optimisation techniques show hope for getting past these problems because they quickly look through the solution space by using ideas from quantum computers. The main focus of this research is on improving healthcare networks that are run by AI, with help from quantum physics. When it comes to healthcare network optimisation, the first things that are talked about are allocating resources, planning routes for patients and medical staff and tools, and making plans for treatment. This essay looks at the pros and cons of these methods and how they might be used to solve different planning problems in healthcare networks. In the end of this research, the interesting role of quantum mechanics-based planning in the creation of AI applications for healthcare networks is explained. This could lead to future healthcare systems that are more sensitive, flexible, and effective. © 2024, IGI Global. All rights reserved.

SciVal Topics

References (16)

[View in search results format](#)

☐ All [Export](#)  Print  E-mail  Save to PDF [Create bibliography](#)

- ☐ 1 Ahmed, Z., Zeeshan, S., Mendhe, D., Dong, X.
Human gene and illness connections for clinical genomics and precision medicine studies (2020) *Clinical and Translational Medicine*, 10, pp. 297-318. [Cited 136 times](#).
- ☐ 2 Amin, J., Sharif, M., Gul, N., Kadry, S., Chakraborty, C.
[Quantum Machine Learning Architecture for COVID-19 Classification Based on Synthetic Data Generation Using Conditional Adversarial Neural Network](#)
(2022) *Cognitive Computation*, 14 (5), pp. 1677-1688. [Cited 59 times](#).
<https://www.springer.com/journal/12559>
doi: 10.1007/s12559-021-09926-6
[View at Publisher](#)
- ☐ 3 Ananth, C., Brabin, D., Bojjagani, S.
Blockchain-based security framework for sharing digital images using reversible data hiding and encryption
(2022) *Multimedia Tools and Applications, Springer US*, 81 (6), pp. 1-18. [Cited 3 times](#).
- ☐ 4 Cameron, E., Green, M.
(2015) *Making Sense of Change Management: A Complete Guide to the Models, Tools and Techniques of Organizational Change*. [Cited 435 times](#).
(4th ed.). Kogan Page

Chapters in this book

[View Scopus details for this book](#)

22 chapters found in Scopus

- > Machine learning and molecular simulation: A new frontier in quantum dynamics
- > Quantum-inspired deep learning for networked data analysis with quantum networked discord and allies
- > Enhancing character recognition accuracy through quantum networking with data augmentation and convolutional neural network
- > Preface
- > Quantum networking-empowered RFID conveyor to boat systems

[View all](#)

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert](#)

Related documents

[Collective dynamics of "small-world" networks enhanced by quantum technology for trusted ai transactions](#)

Devi, A.S. , Saffina, C. , Pandit, S.V.
(2024) *Quantum Networks and Their Applications in AI*

[Quantum algorithms for network analysis in pathobiology with quantum network medicine](#)

Rambabu, M. , Kavitha, S. , Suganthi, C.
(2024) *Quantum Networks and Their Applications in AI*

[Quantum-inspired deep learning for networked data analysis with quantum networked discord and allies](#)

Labhane, S. , Radha, J. , Pokkuluri, K.S.
(2024) *Quantum Networks and Their Applications in AI*

[View all related documents based on references](#)

Find more related documents in Scopus based on:

[Authors](#)