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Use of Deep Learning and Blockchain Technologies in Healthcare Industry

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Abstract

This editorial summarises the special issue entitled "Deep Learning Blockchain-enabled Technology for Improved Healthcare Industrial Systems", which deals with the intersection and use of deep learning and blockchain technologies in the healthcare industry. This special issue consists of eleven scientific articles.

Keywords

Classification; Convolutional neural network; COVID-19; Electronic health record; Transfer learning algorithm; Multimodal biometric system.

We are pleased to introduce this special issue on *Deep Learning Blockchain-enabled Technology for Improved Healthcare Industrial Systems*. The collection of articles in this issue explores the intersection and use of deep learning and blockchain technology in the healthcare industry, with a particular focus on how these technologies can improve healthcare systems.

All articles were thoroughly reviewed by two or three international experts in the field of computer science. The reviewers were selected by the Special Issue Editors and Editor-in-Chief, who served as Academic Editor for all the articles. With the recommendation from the reviewers, the Editor-in-Chief sent the final notifications of acceptance, revision or rejection to the authors. After further selection and peer review, eleven articles were accepted (acceptance rate 21%) for publication in *Acta Informatica Pragensia* (volume 12, issue 1).

Articles in this special issue cover a range of topics, from using deep learning techniques to detect skin cancer and SARS-CoV-2, to developing optimized algorithms for image classification in multimodal biometric systems, to analysing performance metrics for machine learning classifiers with a focus on Alzheimer's disease data. Additionally, two review articles in the special issue provide a comprehensive survey of electronic health record management and security using blockchain technology, which is becoming increasingly important as the use of electronic health records continues to grow.

We believe that the articles in this special issue will be of great interest to researchers and practitioners in the healthcare industry, as well as to those in the fields of machine learning and blockchain technology. By bringing together cutting-edge research from these fields, this special issue provides a unique opportunity to explore the potential of these technologies to improve healthcare systems. We hope that these thematic articles will enable further development not only in the field of healthcare but also in other socially or business-oriented areas.

We expect that the articles in this special issue will stimulate further research and discussion on the use of deep learning and blockchain technology in healthcare. We look forward to seeing the impact of these works on the healthcare industry in the coming years.