

Inauguration of a unique journal the *Journal of Digital Health*: a new beginning seeking innovative technology and research for digital health

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Introduction

As the Editor-in-Chief of the newly founded journal the *Journal of Digital Health* (JDH), I am honored to introduce this journal to you on behalf of Luminescence Press Ltd.

JDH is an open access and peer-reviewed journal that publishes high-quality original articles from a wide variety of interdisciplinary perspectives concerning the theory and practice of artificial intelligence (AI), big data and informatics in the medical and healthcare industries to improve the quality and efficiency of healthcare. The journal publishes original articles, reviews, perspectives, research highlights and case reports that present the application of digital technologies in medical diagnostics and treatment, medical devices, machine learning-based decision support, medical record database and intelligent and process-aware information system in healthcare and medicine. We are committed to promoting the interdisciplinary research among clinicians, basic scientists and industrial experts and facilitating the clinical transformation of industrial technologies. Our ultimate mission is to enable the frontiers of science and technology better serve medicine and ultimately contribute to the healthcare of patients.

Digital technology has a revolutionary influence on the healthcare

The ageing population, enormous medical data and increasing medical costs demand changes in how we pursue healthcare in the future. With the rapid development of digital technology in recent decades, it has gradually become an integral part of healthcare and opened up new frontiers in the practice of medicine. The transformation of digital technology significantly facilitates the overall development of both healthcare systems and industrial technologies.

The fields where digital technology has made an enormous impact on healthcare include the storage and access of medical data, the further analysis of medical data, such as epidemiological studies, genetic research and clinical trials, image data processing using computer vision, effective communication between medical professionals and patients, electronic health records, and online education, etc. Artificial Intelligence, blockchain, mobile healthcare apps, wearables and many other advancements play a positive role in these changing processes. As long as the governments, healthcare organizations and healthcare professionals keep their

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minds open, keep finding medical pain points, create and apply the required infrastructure and systems, digital technology is expected to contribute more to changing the future of healthcare.

The challenges that digital technology may face when positive changes were brought to healthcare

Digital technology may face some challenges when positive changes are brought to healthcare. Medical records involve various kinds of data, including human disease information, physiological conditions, images and even the privacy of daily life. If there is no regulatory measure, it will inevitably lead to privacy problems. Various ethical issues, such as human rights and racial discrimination, will confront problems for a long time in the future.

At the same time, digital health may face challenges from shared values. On February 19, 2020, the European Commission issued a white paper on artificial intelligence, emphasizing the need for "promoting the development and deployment of artificial intelligence on the basis of European values". However, with the common development of digital technology in different countries and areas, it will undoubtedly face the problem of inadequacy in adaptation and the establishment of a shared value for global digitalization is also urgent.

In addition, the logical unaccountability of some digital technology is also noteworthy. AI, one of the most prominent examples, has witnessed progress in many medical fields, including surgical robots and intelligent diagnostic systems. However, the opacity of AI in medical treatment has triggered people's distrust, which hinders its further development. It can be an important research direction for researchers focusing on explainable AI that helps people understand and interpret predictions made by machines.

New technologies always face new challenges. Perhaps the best choice is to meet these challenges and try our best to solve them and make contributions to the development of the whole industries.

Mission and responsibility of JDH

We encourage and support digital health-related research. In the process of our development, we will overcome challenges, strengthen innovation and promote the integration of digital technology and human health. We put people first, promote the sustainable development of digital health and devote ourselves to building a human health community. We hope that digital technology can help doctors conduct more clinical research and help patients get medical help easier and faster. At the same

time, we also hope to play a greater and more active role in human health in the future and make digital health fairer, more just and more equal. In the future, digital technology will allow patients to maintain a healthy lifestyle and a healthy state as much as possible based on their health data and appropriate health care measures. These are the reasons why we established this journal.