

Special Issue

Leveraging AI Algorithms to Enhance Healthcare Systems

Message from the Guest Editors

This Special Issue will offer a comprehensive exploration of the transformative impact of artificial intelligence on modern medicine and healthcare delivery. It aims to bridge the gap between theoretical AI concepts and practical clinical applications. Its chapters will delve into the core AI and machine learning methodologies—from neural networks to natural language processing—that are revolutionizing medical diagnostics, predictive modeling for disease outbreaks, and the development of personalized treatment protocols. Key sections will scrutinize the role of AI in interpreting complex medical imaging, accelerating drug discovery pipelines, and optimizing hospital operational workflows for enhanced efficiency and patient outcomes. Furthermore, this Special Issue will address the critical ethical, regulatory, and data privacy challenges inherent in integrating AI into clinical practice. This issue aims to equip researchers, clinicians, data scientists, and healthcare administrators with the knowledge required to navigate and harness the power of AI, ultimately fostering a new era of data-driven, patient-centric healthcare.

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Message from the Editor-in-Chief

Systems is a leading venue for the quick and global dissemination of results of cutting-edge research in various areas of systems science and systems-related fields. An increasing number of researchers are realizing the enormous potential of systems thinking in managing the many unprecedented and complex issues in all areas of need. The *Systems* journal provides a home of exceptional quality for the manuscripts of these researchers who often find it difficult to publish their work in conventional discipline focused journals.

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