Special Issue

Multimodal Deep Learning and Its Application in Healthcare

Message from the Guest Editor

This Special Issue aims to bridge the gap between the mathematical theory of deep and foundation models and their applications in multimodal healthcare data. It seeks to explore both rigorous theoretical developments and practical implementations that advance our understanding and use of deep learning in real-world healthcare contexts.

The journal Mathematics focuses on mathematical and theoretical aspects across various scientific fields. Therefore, this Special Issue is particularly interested in contributions that achieve one of the following:

- Provide mathematical insights into deep learning and multimodal models, including generalization bounds, convergence analyses, optimization theory, and information-theoretic frameworks;

- Apply these methods to solve important problems in healthcare and biomedical imaging, demonstrating how mathematical foundations contribute to practical advances.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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