# Special Issue

# Building Fast and Secure Deep Learning-Driven Applications in Healthcare

## Message from the Guest Editors

Deep learning (DL) has made major strides in image, video, and language processing, including generative AI like ChatGPT. In healthcare, DL supports medical imaging, disease prediction, robotics, drug discovery, virtual assistants, and personalized treatments—offering improved accuracy, efficiency, and remote care. Yet, challenges remain:

- **Computational Speed**: Real-time data processing needs fast, secure hardware.
- **Data Security**: Patient privacy must be ensured.
- **Model Robustness**: DL must resist adversarial attacks and noise.

Recent solutions include Edge AI for privacy-preserving training, lightweight neural networks for faster inference, and secure ML deployment at the edge. We invite submissions to our Special Issue (deadline: 31 Jan 2026), aiming to advance scalable, secure, and efficient DL in healthcare. Original research and reviews are welcome in areas such as:

- Intelligent assistive robotics
- Low-cost, low-power DL hardware
- Real-time DL in healthcare
- AI-powered virtual healthcare

We look forward to your contribution.

## Guest Editors

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## Deadline for manuscript submissions

15 April 2026

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## Editor-in-Chief

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