

IEEE Transactions on Consumer Electronics

Call for Papers

Special Section on “Edge AI Strategies for Fortifying Security and Privacy in Healthcare Devices”

Theme:

The integration of Edge AI technologies into medical devices has been becoming increasingly prevalent over the last few years in light of the rapidly evolving landscape of healthcare technology. Despite the fact that this integration is accelerating, the security and privacy concerns surrounding healthcare devices are becoming increasingly critical as a consequence. By focusing on cutting-edge AI strategies specifically designed to fortify the security and privacy aspects of healthcare devices, this Special Section hopes to address these pressing issues in a comprehensive manner. This Special Section provides an in-depth exploration of innovative approaches at the intersection of Edge AI, healthcare, and security in an attempt to provide a comprehensive overview. By establishing a dedicated platform, we aim to foster collaboration among researchers and practitioners, offering them the opportunity to disseminate their latest breakthroughs, engage in meaningful discussions around existing challenges, and collectively propose effective solutions to these challenges.

We invite contributions that explore the intersection of Edge AI, healthcare technology, and data protection. Contributions should provide practical insights, experimental validations, and real-world applications. The special issue seeks to assemble a comprehensive collection of cutting-edge research that addresses the intricate challenges and opportunities at the nexus of Edge AI, security, and privacy in healthcare devices. Technical scope includes, but is not limited to:

- Edge AI Applications in Healthcare Security
- Edge and Tiny Machine Learning Models for Real-time Healthcare Security
- Privacy-Preserving Edge AI Algorithms
- Secure Edge Computing Architectures
- Edge AI for Biomedical IoMT Security
- Blockchain integration with Edge AI
- Blockchain Integration for Secure Health Data Transactions
- Adversarial Defense in Edge AI
- Ethical Considerations in Edge AI for Healthcare
- Legal and societal implications of AI in consumer electronics and healthcare
- Explainable AI approaches for consumer trust and transparency
- Machine Learning and Deep Learning in Healthcare Security
- Federated Learning for Privacy-Preserving Healthcare Systems
- Big Data Analytics for Healthcare Insights and Security
- Generative Artificial Intelligence with Applications on Consumer Electronics

Important dates:

- Submissions Deadline: June 30, 2024
- Tentative Publication Date: 1st quarter, 2025

Guest Editors:

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Instructions for authors:

Manuscripts should be prepared following guidelines at: [https://ctsoc.ieee.org/publications/ieee-
transactions-on-consumer-electronics.html](https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html) and must be submitted online following the IEEE Transactions on Consumer Electronics instructions: [https://ctsoc.ieee.org/publications/ieee-
transactions-on-consumer-electronics.html](https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html). During submission, the Special Section on “**Edge AI Strategies for Fortifying Security and Privacy in Healthcare Devices**” should be selected.