



ICONIP 2023

November 20-23, 2023, Changsha, China

Invited Session Proposal for ICONIP2023

Title: AI-based Multimodal Data Analysis for Medical and Health Applications

Description: The use of artificial intelligence (AI) in medical and health applications has gained considerable attention in recent years. AI has the potential to improve medical diagnosis, treatment, and management by analyzing large and complex multimodal datasets that are generated in various medical settings. The objective of this session is to showcase recent advances in AI-based multimodal data analysis for medical and health applications, with a focus on ChatGPT, transformer, generative AI, and other recent advancements in AI.

The key focuses of this session are: 1) overview of recent advancements in AI-based multimodal data analysis for medical and health applications, 2) discussion of the applications of AI in medical data analysis, 3) sharing of research findings and experiences in the development of AI-based medical data analysis tools and techniques, 4) exploration of the ethical considerations in AI-based medical data analysis, and 5) identification of the future research directions and opportunities in AI-based medical data analysis.

Overall, this session aims to provide a platform for researchers and practitioners to discuss and share their latest research findings in AI-based healthcare. The session will provide an opportunity for the participants to network and establish collaborations for future research projects. We hope that this session will inspire researchers to explore novel applications of AI in healthcare and contribute to the development of innovative solutions for improving patient outcomes.

Topics include (but are not restricted to):

- Machine learning for multimodal medical data analysis,
- Natural language processing for medical data analysis, report generation, or mental health tools,
- Deep learning for medical image analysis,
- Predictive modeling for patient outcomes using electronic health records,
- Generative AI for synthetic data generation, or modification of data for medical training,
- Integration of AI technologies for multimodal medical data analysis,
- Clinical applications of AI-based medical data analysis,
- Ethical considerations in AI-based medical data analysis.

Proposers:

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2. Syed Mohammed Shamsul Islam, Senior Lecturer, Edith Cowan University, Perth, Australia. syed.islam@ecu.edu.au
3. Asim Iqbal, Machine Learning Advisor, LAAM Technologies in Seattle, WA, and Adjunct Assistant Professor, Cornell University, USA. iqbala@ini.ethz.ch
4. Bao-Liang Lu, Professor, Department of Computer Science and Engineering, Shanghai Jiao Tong University, China. blu@sjtu.edu.cn
5. Tom Gedeon, Professor, Optus Chair for AI, Curtin University, Perth, Australia. Tom.Gedeon@curtin.edu.au

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