Jiahui Li

Ph.D. Student, School of Computing
University of Georgia

Athens, Georgia, USA | jl57095@uga.edu
jimmylihui.github.io | Google Scholar | GitHub | LinkedIn

Research Interests

Mobile and wearable sensing, human-centered AI, and healthcare applications, with a focus on deep learning for physiological time series and signal processing. My work spans cardiomechanical and physiological signal analysis (ECG, PPG, BCG, BSG), instruction-tuned large language models for health, and clinical benchmark design.

Education

University of Georgia *2024 – present*
Ph.D. in Computer Science. Advisor: Dr. Fei Dou.

University College London *2021 – 2022*
M.S. in Scientific and Data-intensive Computing (Merit).

University of Liverpool / Xi'an Jiaotong-Liverpool University *2017 – 2021*
B.S. in Computer Science and Engineering.

Experience

Ph.D. Student, University of Georgia *2024 – present*
Advisor: Dr. Fei Dou. Research on wearable and physiological sensing, large language models for health signals, and clinical benchmarks.

Research Assistant, Hong Kong University of Science and Technology *2023 – 2024*
Advisor: Prof. Dit-Yan Yeung. Deep learning for multivariate long-term time-series forecasting.

Publications

Author names in bold indicate myself.

1. **Jiahui Li**, Ruili Fang, Zishuai Liu, Yutong Guo, Nan Yang, Wenzhan Song, Jin Lu, Fei Dou. EarlyDx: An Admission-Anchored Benchmark for Open-Ended Generation of Evidence-Supported ED-Encounter Diagnoses. *Preprint*, 2026.
2. **Jiahui Li**, Yida Zhang, Zixuan Zeng, Jiayu Chen, Yingjian Song, Yin Xiao, Nishan Dong, Junjie Lu, Younghoon Kwon, Xiang Zhang, Jin Lu, Wenzhan Song, Fei Dou. Peak-Detector: Explainable Peak Detection via Instruction-Tuned Large Language Models in Physiological Signals. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 2026.
3. **Jiahui Li**, Ruili Fang, Zishuai Liu, WenZhan Song, Jin Lu, Fei Dou. DeepArrhythmia: Segment-Contextualized ECG Arrhythmia Classification via Selective Evidence Acquisition. *Preprint*, 2026.
4. Weihang You, Hanqi Jiang, **Jiahui Li**, Zishuai Liu, Tianming Liu, Jin Lu, Fei Dou. ADLGen: Synthesizing Symbolic, Event-Triggered Sensor Sequences for Smart-Home Human Activity Modeling. *ACM SenSys*, 2026.
5. **Jiahui Li**, Yida Zhang, Zixuan Zeng, Jiayu Chen, Xiang Zhang, Jin Lu, WenZhan Song, Fei Dou. Peak-R1: Instruction-Tuned Large Language Models for Robust J-Peak Detection in Cardiomechanical Signals. *NeurIPS 2025 Workshop on Learning from Time Series for Health.*
6. Haoran Lu, Luyang Fang, Ruidong Zhang, et al. Alignment and Safety in Large Language Models: Safety Mechanisms, Training Paradigms, and Emerging Challenges. *Preprint*, 2025.
7. Zicheng Liu, **Jiahui Li**, Siyuan Li, Zelin Zang, Cheng Tan, Yufei Huang, Yajing Bai, Stan Z. Li. GenBench: A Benchmarking Suite for Systematic Evaluation of Genomic Foundation Models. *Preprint*, 2024.

Skills

- **Programming:** Python, MATLAB, Git
- **Machine Learning:** PyTorch, deep learning for time series, large language model fine-tuning
- **Research:** Signal processing, physiological data analysis, benchmark design