

XIAOLONG LUO (AARON)

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Google Scholar | LinkedIn | Last update: October 2025

EDUCATION

Harvard University Ph.D. Candidate in Engineering Science	Cambridge, Massachusetts Sep. 2022 – Present
Harvard University S.M. in Computer Science	Cambridge, Massachusetts Sep. 2022 – May 2025
University of Science and Technology of China Bachelor of Technology in Statistics	Anhui, China Sep. 2018 – Jun. 2022

RESEARCH INTERESTS

My ultimate research goal is to develop the *foundations* of next-generation artificial intelligence to enhance AI's effectiveness and practical applications in healthcare. My research interests focus on the following key directions:

- **Flexible Diagnostic Models with Multi-task and Multi-modal Learning.** I work on developing advanced AI models that can simultaneously handle multiple diagnostic tasks while effectively integrating various types of medical data (imaging, clinical notes, lab results) to provide more comprehensive and accurate medical assessments.
- **Democratizing Healthcare Access through AI Agents.** I am dedicated to developing intelligent healthcare agents that make medical resources and consultations more accessible and convenient for everyone. This includes creating AI systems that can provide preliminary medical advice, assist in resource allocation, and bridge the gap between patients and healthcare providers.

PUBLICATIONS

- [4] **The CRITICAL Records Integrated Standardization Pipeline (CRISP): End-to-End Processing of Large-scale Multi-institutional OMOP CDM Data**
Xiaolong Luo, Michael Lingzhi Li
ML4H 2025 (spotlight talk), Dec. 2025
- [3] **Towards Interpretable, Sequential Multiple Instance Learning: An Application to Clinical Imaging**
Xiaolong Luo, Hsin-Hsiao Scott Wang, Michael Lingzhi Li
AMIA Annual Symposium, Nov. 2025
- [2] **AI Transformers for Radiation Dose Reduction in Serial Whole-Body PET Scans**
YR Wang, L Qu, ND Sheybani, **X Luo**, J Wang, KE Hawk, AJ Theruvath, ...
Radiology: Artificial Intelligence (IF: 22.5), Apr. 2023
- [1] **Learning Pruning-Friendly Networks via Frank-Wolfe: One-Shot, Any-Sparsity, and No Retraining**
Miao Lu*, **Xiaolong Luo***, Tianlong Chen, Wuyang Chen, Dong Liu, Zhangyang Wang
ICLR (Spotlight), Virtual, Mar. 2022

RESEARCH EXPERIENCES

AI for Healthcare Applications Advisors: Prof. Michael Lingzhi Li (HBS, Harvard), Prof. Scott Wang (HMS)	Harvard, May 2023 – Present
Online Spike Sorting Advisor: Prof. Jia Liu (SEAS, Harvard)	Harvard, Oct. 2022 – Feb. 2023
Learning Pruning-Friendly Networks via Frank-Wolfe Advisor: Prof. Zhangyang Wang (ECE, UT Austin)	UT Austin, May 2021 – Oct. 2021
PET/MRI Image Super-Resolution Program Advisor: Dr. Joyce Wang (Stanford AIMI)	Stanford & USTC, Feb. 2021 – Apr. 2022

INVITED TALKS

Towards Interpretable, Sequential Multiple Instance Learning: An Application to Clinical Imaging INFORMS Annual Meeting, Seattle; AMIA Annual Symposium 2025, Atlanta	2024
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ACADEMIC SERVICES

Conference Reviewer CVPR 2026, ICLR (2025; 2026), NeurIPS 2025 Workshops (Imageomics; GenAI4Health), ML4H 2025	
Journal Reviewer Pattern Recognition	

TEACHING ASSISTANT

ENG-SCI 139/239: Innovation in Science and Engineering (Teaching Fellow) Instructor: Prof. David Ricketts; Class size: 113	Fall 2025
COMPSCI 1090B: Data Science 2: Advanced Topics in Data Science (Teaching Fellow) Instructors: Prof. Pavlos Protopapas (SEAS) & Natesh Pillai (Statistics); Class size: 277	Spring 2025
NEURO 240: Biological and Artificial Intelligence (Teaching Fellow) Instructor: Prof. Gabriel Kreiman; Class size: 142	Spring 2025
AM101: Statistical Inference for Scientists and Engineers (Head TF) Instructor: Prof. Rob Howe; Class size: 55	Spring 2024
CS 182: Artificial Intelligence Instructors: Prof. Stephanie Gil; Prof. Milind Tambe (Harvard SEAS); Class size: 138	Fall 2023
Stat 139: Introduction to Linear Models Instructor: Prof. James Xenakis (Harvard GSAS); Class size: 83	Fall 2023
Probability Theory and Mathematical Statistics Instructor: Prof. Canwen Hong (Applied Math, USTC); Class size: 97	Fall 2021
Differential Equation I Instructor: Prof. Wuqing Ning (Applied Math, USTC); Class size: 156	Fall 2020

EXTRACURRICULAR ACTIVITIES & INTERESTS

Co-director of the Harvard GSAS Entrepreneur Club, AI Community Led initiatives to foster entrepreneurship and AI-focused projects within the Harvard GSAS community.	Sep. 2023 – Sep. 2024
Founding Member of FutureX Established a web3 community, winning the second prize in "H-InnoPitch" and securing pre-seed funding; selected for MiraclePlus 22 Fall Accelerator.	Jul. 2022 – Jan. 2023
CYDP Program (Columbia Young Development Program) Led a team to win a business plan competition after completing courses in business analytics and machine learning.	Columbia University, Jan. 2019 – Feb. 2019

AWARDS AND HONORS

The 41st Guo Moruo Scholarship (top 1%, highest honor at USTC)	2021
Outstanding Student Scholarship, Golden award (top 5%)	2020
National Scholarship (top 1%, from Ministry of Education of China)	2019
Chinese Mathematics Competitions, Anhui, The Second Prize	2019

SKILLS

Programming Languages: Python, C/C++, R, HTML, JavaScript	
Frameworks & Tools: PyTorch, TensorFlow, PyG, scikit-learn, OpenCV, React, Git, Docker, Linux, Figma	
Languages: English, Mandarin	