

JAXI LI

University of Georgia, School of Computing
+1-(470)-263-8931 | e: jx.li@uga.edu / jiaxi.li0216@gmail.com
Homepage: plusnli.github.io

EDUCATION

University of Georgia

Graduate Student

GA, USA

Aug. 2024 - now

- GPA: 3.75/4
- Research Focus: Large Language Models, Multimodal Large Language Models, Machine Reasoning, Healthcare.

Shandong University

Bachelor of Science in Computer Science and Technology

Shandong, China

Sep. 2020 – Jun. 2024

- GPA: 87.8/100
- Selected awards: Three-time recipient of the Third-class Academic Scholarship Prizes (Nov. 2021, Nov. 2022, Nov. 2023)

SELECTED PUBLICATIONS AND PRE-PRINTS

(*Equal Contribution, †Corresponding Author.)

[MITS: Enhanced Tree Search Reasoning for LLMs via Pointwise Mutual Information](#)

Jiaxi Li, Yucheng Shi, Jin Lu, Ninghao Liu

Preprint.

[Automating Expert-Level Medical Reasoning Evaluation of Large Language Models](#)

Shuang Zhou*, Wenya Xie*, Jiaxi Li*, Zaifu Zhan, ..., Yucheng Shi, Ninghao Liu, Zirui Liu, Rui Zhang

Accepted in *npj Digital Medicine*.

[Mitigating Hallucination Through Theory-Consistent Symmetric Multimodal Preference Optimization](#)

Wenqi Liu, Xuemeng Song†, Jiaxi Li, Yinwei Wei, Na Zheng, Jianhua Yin, Liqiang Nie

Published in *The Thirty-Ninth Annual Conference on Neural Information Processing Systems (NeurIPS 2025)*.

[Fact or Guesswork? Evaluating Large Language Models' Medical Knowledge with Structured One-Hop Judgments](#)

Jiaxi Li, Yiwei Wang, Kai Zhang, Yujun Cai, Bryan Hooi, Nanyun Peng, Kai-Wei Chang, Jin Lu

Preprint.

[HELENE: Hessian Layer-wise Clipping and Gradient Annealing for Accelerating Fine-tuning LLM with Zeroth-order Optimization](#)

Huaqin Zhao*, Jiaxi Li*, Yi Pan, Shizhe Liang, Xiaofeng Yang, Fei Dou, Tianming Liu, Jin Lu

Published in *The 2025 Conference on Empirical Methods in Natural Language Processing Main Conference (EMNLP 2025 Main)*.

[Proximal Federated Learning for Body Mass Index Monitoring using Commodity WiFi](#)

Jiaxi Li, Kiran Davuluri, Khairul Mottakin, Zheng Song, Fei Dou, Jin Lu

Published in *ICASSO Workshop of the 30th Annual International Conference on Mobile Computing and Networking (ICASSO@MobiCom 2024)*.

RESEARCH EXPERIENCE

UCLA / UC Merced

Remote

Supervised by Prof. [Yiwei Wang](#)

Jul. 2024 – Feb. 2025

Research Focus: Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Healthcare

- Researched on Retrieval-Augmented Generation (RAG) with LLMs and its application in healthcare.
- Finished a first-author work [Fact or Guesswork? Evaluating Large Language Models' Medical Knowledge with Structured One-Hop Judgments](#). We build the MKJ dataset, a factuality dataset for assessing LLMs'

factual knowledge. We study the different aspects (performances, calibration, ...) of LLMs based on the MKJ dataset and find several interesting observations.

Hong Kong Baptist University (HKBU), Trustworthy Machine Learning and Reasoning (TMLR) Group Remote Working with PhD Candidate [Zhanke Zhou](#) & Supervised by Prof. [Bo Han](#) April. 2024 – Now

Research Focus: Machine Reasoning with Foundation Models

- Focus on LLM/MLLM Reasoning, including Test-time Scaling Compute, RL, and Agentic Tool Learning.
 - Researched on LLM Jailbreaking and run experiments for the paper [DeepInception: Hypnotize Large Language Model to Be Jailbreaker](#) ([Published in NeurIPS 2024 SafeGenAI Workshop](#)).
 - Build an interesting reasoning dataset based on theft detective scenarios which tests the limitation of LLMs' logical reasoning abilities, which is now in part of paper [From Passive to Active Reasoning: Can Large Language Models Ask the Right Questions under Incomplete Information?](#) ([Published in ICML 2025](#)).
 - Participated in developing python package *reasoning-pro*, a comprehensive package for running reasoning-related models, algorithms and benchmarks (Responsible for the benchmark and evaluation part).

Rensselaer Polytechnic Institute, Data Analytics and Machine Intelligence (DAMI) Lab

Remote

Supervised by Prof. Yao Ma

Sep. 2023 – Jan. 2024

Research Focus: Graph Neural Networks

- Focused on the topic “When do Graph Neural Networks (GNNs) work on node classification and when not”.
 - Deepened understanding of the fundamental mechanism behind GNNs and why they can perform well under certain heterophily.
 - Wrote a [blog](#) ([Link to Zhihu](#)) to summarize how homophily and heterophily influence GNNs from a unified perspective based on papers [Is Homophily a Necessity for Graph Neural Networks?](#), [Demystifying structural disparity in graph neural networks: Can one size fit all?](#), and other relevant papers.
 - Conduct extensive experiments to explore further research questions (e.g., whether class-wise homophily has relation with class-wise prediction accuracies; to develop evaluation metrics to quantify the discriminative ability of GNN after each aggregation step).

Shandong University, Information Retrieval Lab (IRLab)

Qingdao, China

Supervised by Prof. Zhaojun Ren

Feb. 2023 – Aug. 2023

Supervised by Prof. Martin Ried

- Participate in training a Retrieval-Augmented LLM for legal judgements, which is open-sources in GitHub ([link](#)).
 - Innovated new evaluation metrics, utilizing advanced LLMs such as GPT-4, Vicuna, and ChatGLM, specifically tailored for Natural Language Processing tasks like Text Summarization and Open Domain Question Answering.
 - Implemented cutting-edge techniques including Prompt learning, Parameter-efficient learning, and Finetuning to fine-tune LLMs for optimal performance.

WORK EXPERIENCE

Shandong Houde Measurement and Control Technology Co., Ltd.

Jinan China

Research Intern, Software and Research Department

Jun 2022 – Sep 2022

- Assisted the department in the research and development of the corn yield measurement control system and a third-party testing system for an integrated development environment, with a focus on deep learning for data analysis
 - Participated in the optimization and deployment of natural language models during the software development process