Jiahang Li

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Education

2026–	**University of Waterloo**, *PhD*, Computer Science, (quit due to visa issues). supervisor: Dr. Yang Lu
2022–Now	**The Hong Kong Polytechnic University**, *Master*, Computer Science.
2018–2022	**Beijing University of Posts and Telecommunications**, *Bachelor*, Computer Science. GPA: 86.37/100, IELTS: 7.0

Research interests

Algorithmic design, system design and applications of Graph Machine Learning and Large Language Models.

Experience

2024–2025 Research Assistant, University of Madison Wisconsin, **supervisor**: Dr. Yang Lu.

1. **FDR Control for Causal Graph Learning**
   Applying Knockoff methods to control False Discovery Rate (FDR) of Causal Graph Learning with application on Gene Regulatory Network Inference.
2. **Bioinformatics Agent powered by Dependency Graph**
   Developing an dependency graph construction pipeline for automatic building of Bioinformatics Agent.

2021–2022 Software Development Engineer Intern, Amazon Shanghai AI Lab.

1. **Deep Graph Library (DGL)**
   Implementing GNN models, graph samplers and datasets for DGL framework
   supervisor: Mr. Mufei Li
2. **GNN Initialization**
   Developing a novel parameter initialization method for GNN models
   supervisor: Dr. Xiang Song and Dr. David Wipf
   publication: On the Initialization of Graph Neural Networks (first author), **ICML 2023**
3. **Multi-table Benchmark**
   Developing graph learning solutions for multi-table database.
   supervisor: Mr. Quan Gan, Dr. Minjie Wang and Dr. David Wipf
   publication: 4DBInfer: A 4D Benchmarking Toolbox for Graph-Centric Predictive Modeling on Relational DBs. **NeurIPS 2024 D&B Track**

2020–2021 Research Assistant, GAMMA Lab in BUPT.

1. **OpenHGNN framework**
   Implementing heterogeneous GNN (hGNN) models for OpenHGNN framework
   Implementing hGNN samplers for efficient model training
   supervisor: Dr. Chuan Shi

Publications

1. **Jiahang Li**, Yakun Song, Xiang Song, David Wipf. *On the Initialization of Graph Neural Networks.* **accpeted by ICML 2023**

2. Minjie Wang, Quan Gan, David Wipf, Zhenkun Cai, Ning Li, Jianheng Tang, Yanlin Zhang, Zizhao Zhang, Zunyao Mao, Yakun Song, Yanbo Wang, **Jiahang Li**, Han Zhang, Guang Yang, Xiao Qin, Chuan Lei, Muhan Zhang, Weinan Zhang, Christos Faloutsos, Zheng Zhang. *4DBInfer: A 4D Benchmarking Toolbox for Graph-Centric Predictive Modeling on Relational DBs.* **accepted by NeurIPS 2024 D&B Track**

3. Zipei Yan, Dong Liang, Linchuan Xu, **Jiahang Li**, Zhengji Liu, Shuai Wang, Jiannong Cao, Chea-su Kee. *Vision Loss Estimation using Fundus Photograph for High Myopia.* **accpeted by MICCAI 2023**

4. Xiang Song, Runjie Ma, **Jiahang Li**, Muhan Zhang, David Wipf. *Network in Graph Neural Network.* arXiv preprint arXiv:2111.11638.

5. **Jiahang Li**, abstract *On the Generation of LLM-based Agents for Automatic and Conversational Biological Data Analysis.* **accepted by PolyU COMP - HKUST (GZ) INFH Research Student Conference**

Service

Journal reviewer	SIAM Journal on Mathematics of Data Science (SIMODS)
Conference reviewer	NeurIPS 2025 Datasets and Benchmarks Track

Awards

2021	Second Prize of National English Competition for College Students
2021	Third Prize of National Mathematics Competition for College Students
2021	Honorable Mention of MCM/ICM

Skills

Programming Languages	C/C++, Python, Java, Shellscript, Linux
Machine Learning	PyTorch, Tensorflow, DGL, PyG
Distributed Training	Ray, Horovod, PyTorch Distributed
Web Development	HTML, CSS, Javascript, Vue.js, React.js, Django
Large Language Model	vLLM, sglang, ollama, deepspeed, llamafactor, huggingface