

Jin Huang — Curriculum Vitae

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RESEARCH INTEREST

Knowledge Foundation Model, Deep Learning for Graphs, Trustworthy Machine Learning, AI4Science.

EDUCATION

University of Michigan, Ann Arbor
Ph.D. in Information

Ann Arbor, Michigan
Aug 2024 - Apr 2029 (expected)

- Advised by Professor Qiaozhu Mei.

University of Michigan, Ann Arbor
Bachelor of Science in Computer Science

Ann Arbor, Michigan
Aug 2022 - Jun 2024

- GPA: 3.96/4.0.

Shanghai Jiao Tong University
Bachelor of Science in Electronic and Computer Engineering (Dual Degree Program)

Shanghai
Sep 2020 - Jun 2024

- GPA: 3.78/4.0 (top 10%).

RESEARCH EXPERIENCE

Foreseer Research Group, School of Information, University of Michigan
Research Assistant with Qiaozhu Mei and Jiaqi Ma

June 2022 - Present
Ann Arbor

- Investigated whether LLMs benefit from incorporating structural data into prompts. Analyzed contributing factors, especially data leakage and local homophily. Collected a dataset based on arXiv database to estimate the influence of data leakage on current benchmark datasets [1].
- Built a user-friendly platform for graph learning, optimizing for easy dataset maintenance, dataset usability and better contributor attributions. Benchmarked 20+ datasets with 10+ models [3].

GEMS Lab, Electrical Engineering and Computer Science, University of Michigan
Research Assistant with Danai Koutra

May 2023 - Present
Ann Arbor

- Developed strategies for handling distribution shifts between training and testing data in graph network models for link prediction tasks. Implemented techniques such as augmenting links to improve model robustness in out-of-distribution settings.

John Hopcroft Center for Computer Science, Shanghai Jiao Tong University
Research Assistant with Quanshi Zhang

Feb 2022 - Jan 2023
Shanghai

- Developed game theory concepts like Shapley value and Harsanyi dividend in AI. Designed and implemented the Harsanyi networks, which enables the computation for exact Shapley value in one single forward inference [2].

PUBLICATIONS

- [1] **Huang, Jin**, Xingjian Zhang, Qiaozhu Mei, and Jiaqi Ma. Can LLMs Effectively Leverage Graph Structural Information: When and Why. *arXiv preprint arXiv:2309.16595*, 2023. [pdf] (Under review at Transactions on Machine Learning Research (TMLR); Accepted in GLFrontiers Workshop, NeurIPS 2023)

- [2] Chen, Lu, Siyu Lou, Keyan Zhang, **Jin Huang**, and Quanshi Zhang. HarsanyiNet: Computing Accurate Shapley Values in a Single Forward Propagation. In *Proceedings of the 40th International Conference on Machine Learning*, 4804–4825. PMLR, 2023. (1827/6538, 27.9%)[\[pdf\]](#)
- [3] Ma, Jiaqi, Xingjian Zhang, Hezheng Fan, **Jin Huang**, Tianyue Li, Ting Wei Li, Yiwen Tu, Chenshu Zhu, and Qiaozhu Mei. Graph Learning Indexer: A Contributor-Friendly and Metadata-Rich Platform for Graph Learning Benchmarks. In *Proceedings of the First Learning on Graphs Conference*, 7:1–7:23. PMLR, 2022. (**Oral**, 9/185, 4.6%) [\[pdf\]](#)

PRESENTATIONS

37th Conference on Neural Information Processing Systems

Poster Presentation for [1].

Dec 2023

New Orleans, Louisiana

40th International Conference on Machine Learning

Poster Presentation for [2].

Jul 2023

Honolulu, Hawaii

ACADEMIC SERVICE

Reviewer for ICLR, 2024; ICML 2024.

Student Volunteer for ICML, 2023.

WORK EXPERIENCE

Intel Asia-Pacific Research & Development Ltd

AI Software Platform Intern

Dec 2021 - Mar 2022

Shanghai

- Participated in the development of BigDL, a large-scale AI application for distributed big data analytics, scaling from laptops to cloud infrastructures.
- Maintained an open-source time series analysis project with 4k+ GitHub stars and developed a GAN-based fraud detection algorithm for cash flow.

TEACHING EXPERIENCE

Shanghai Jiao Tong University

Teaching Assistant for VG101: Introduction to Computers and Programming

May 2022 - Aug 2022

Shanghai

- Hosted weekly lab sessions and office hours. Assisted in grading and designing exam problems.

ACTIVITIES, HONORS & SKILLS

Activities: First Generation Engineers Program at University of Michigan.

Honors: Tau Beta Pi, First-Generation Undergraduate Experiential Learning Funding 2022&2023, First Prize in China National Olympiad in Informatics in Provinces (NOIP 2018).

Computer Languages: Python, C++, C, Matlab, Latex, HTML, Bash, Verilog, R, JavaScript.

Tools: Prompting Engineering, Git, Linux, PyTorch, TensorFlow, Scikit-Learn, Jupyter Notebook, Docker.

SELECTED COURSES

- **Graduate Level:** Information Theory, Machine Learning, Continuous Optimization Methods, Network Theory.
- **Undergraduate Level:** Intro to Operating System, Computer Networks, Intro to Autonomous Robotics, Foundations of Computer Science, Computer Vision, Data Structures and Algorithms, Intro to Computer Organization, Human-Centered Software Design, Linear Algebra, Probabilistic Methods in Engineering.