

Hongliang Chi (Frank)

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Research Interests

- Data-centric AI (Data Valuation, Active Learning, Self-Supervised Learning etc.)
- Graph Deep Learning & Graph Neural Networks

Education

- Ph.D. Student in Computer Science,
Rensselaer Polytechnic Institute (RPI), Troy, NY, 2023 - present.
Research Advisor: Prof. Yao Ma. (Transferred with advisor from NJIT)
- Ph.D. Candidate in Computer Science,
New Jersey Institute of Technology (NJIT), Newark, NJ, 2021-2023.
Research Advisor: Prof. Yao Ma. (Transferred out to RPI)
- M.Eng. in Operations Research & Information Engineering,
Cornell Tech, Cornell University, NY, 2020.
- B.Com. in Quantitative Business Analysis & Computer Science,
University of Sydney, Australia, 2016.

Publications

Under Review

1. **H. Chi**, Q. Wu, Z. Zhou, and Y. Ma, *Shapley-Guided Utility Learning for Effective Graph Inference Data Valuation*, Under review.
2. **H. Chi**, W. Jin, C. Aggarwal, and Y. Ma, *Precedence-Constrained Winter Value for Effective Graph Data Valuation*, arXiv preprint [arXiv:2402.01943](https://arxiv.org/abs/2402.01943), Under review.

Published Papers and Preprints

1. **H. Chi** and Y. Ma, *Enhancing Graph Contrastive Learning with Node Similarity*, In Proceedings of ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2024.
2. **H. Chi**, C. Qi, S. Wang and Y. Ma, *Active Learning for Graphs with Noisy Structures*, In Proceedings of the SIAM International Conference on Data Mining (SDM), 2024.
3. Q. Ma, **H. Chi**, H. Zhang, K. Liu, Z. Zhang, L. Cheng, S. Wang, P.S. Yu and Y. Ma, *Overcoming Pitfalls in Graph Contrastive Learning Evaluation: Toward Comprehensive Benchmarks*, arXiv preprint [arXiv:2402.15680](https://arxiv.org/abs/2402.15680), 2024.

Symposiums and Workshops

- *Active Learning for Graphs with Noisy Structures* - **H. Chi**, C. Qi, S. Wang and Y. Ma
19th International Workshop on Mining and Learning with Graphs (MLG 2023).
- *A General Graph Contrastive Learning Boosting Framework* - **H. Chi** and Y. Ma
International Conference on Data Mining (SDM 2022) Doctoral Forum, SIAM, Poster.

Awards and Honors

- SDM'24 Doctoral Forum Travel Award, 2024
- WSDM Student Travel Award, 2024
- WSDM Student Travel Award, 2022
- SDM'22 Doctoral Forum Travel Award, 2022

Professional Service

- Reviewer, The International Conference on Learning Representations (ICLR), 2024
- Reviewer, ACM Transactions on Knowledge Discovery from Data (TKDD), 2023 - 2024
- Reviewer, IEEE Transactions on Knowledge and Data Engineering (TKDE), 2024
- Reviewer, ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2024
- External Reviewer, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD), 2023
- External Reviewer, The ACM International Conference on Information and Knowledge Management (CIKM), 2022
- Reviewer, Machine Learning on Graphs Workshop at The ACM International Conference on Web Search and Data Mining (WSDM), 2022
- External Reviewer, ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2022
- External Reviewer, The Web Conference (WWW), 2022

Academic Experience

- **Teaching Experience**
 - Head Teaching Assistant, Machine Learning From Data, RPI, Fall 2024
 - Teaching Assistant, Principles of Software, RPI, Spring 2024
 - Teaching Assistant, Computer Science I, RPI, Fall 2023
 - Teaching Assistant, Introduction to Machine Learning, NJIT, Fall 2022
- **Research Experience**
 - Research Assistant, Data Analytics and Machine Intelligence (DAMI) Lab, NJIT
 - * Fall 2021, Spring 2022, Summer 2022, Summer 2023

Industry Experience

- **Summer Research Intern**, AT&T Labs, Internship, Bedminster, NJ, US, Summer 2024
- **Associate Data Scientist**, Gap Inc., Full-time, San Francisco, CA, US, 2020-2021.
- **Algorithm Engineer**, Cardinal Operations, Full-time, Beijing, China, 2017-2019.
- **Associate Consultant**, EY, Full-time, Beijing, China, 2016-2017.

Selected Volunteer Work

- **KDD'22 Conference Volunteer**, Washington DC, 2022
- **Cornell University Covid-Period Course Roster Team**, Summer 2020
 - Member of Cornell's Course Roster and Scheduling Team led by Prof. David Shmoys
 - Developed automatic tools for providing user-friendly schedule outputs
 - Built optimization model as one of the decomposition approaches for course scheduling
 - Project featured in *Cornell Engineering News*