

☑ pbb@illinois.edu \square (+1) 734 882 7750

Research Interest

Machine Learning

Trustworthy Machine Learning, Data-Centric AI, Statistical Learning Theory, Manifold and Graph Learning

Theoretical Computer Science

Fast Graph Algorithm, Approximation Algorithm, Learning Theory

EDUCATION

University of Illinois Urbana-Champaign

Ph.D. Candidate in Information Science, School of Information Science

o Advisor: Jiaqi Ma

University of Illinois Urbana-Champaign

M.S. in Applied Mathematics, College of Liberal Arts & Sciences

o Concentration: Optimization and Algorithms

University of Michigan

B.S. in Computer Science with Summa Cum Laude, College of Engineering

o Minor: Mathematics, College of Literature, Science, and the Arts

Shanghai Jiao Tong University

B.E. in Electrical and Computer Engineering, UM-SJTU Joint Institute

o Minor: Computer Science, UM-SJTU Joint Institute

Illinois

Aug. 2023-Present

Illinois

Aug. 2023-Aug. 2025

Michigan

Aug. 2021-May 2023

Shanghai, China

Aug. 2019-Aug. 2023

Research and Industry Experience

Deep Learning Research, Susquehanna International Group

Machine Learning Ph.D. Intern

Alignment Science Team, Anthropic

AI Safety Research Fellows

AWS AI Lab, Amazon

Applied Scientist Intern

Sugiyama Laboratory, National Institute of Informatics

Research Intern

o Advisor: Mahito Sugiyama

SURE Program, University of Michigan

Undergraduate Researcher

o Advisor: Wei Hu

Pennsylvania

(Incoming) June 2026-Aug. 2026

San Francisco

(Incoming) Jan. 2026-May. 2026

New York

May 2025-Aug. 2025

Tokyo, Japan

May 2024-Aug. 2024

Michigan May 2022-Apr. 2023

PEER-REVIEWED CONFERENCE PUBLICATIONS

(* denotes equal contribution)

- [C1] Pingbang Hu, Joseph Melkonian, Weijing Tang, Han Zhao, Jiaqi W. Ma, "GRASS: Scalable Data Attribution with Gradient Sparsification and Sparse Projection". In Proceedings of the 39th Advances in Neural Information Processing Systems (NeurIPS 2025)
- [C2] Yiwen Tu*, Pingbang Hu*, Jiaqi W. Ma, "A Reliable Cryptographic Framework for Empirical Machine Unlearning Evaluation". In Proceedings of the 39th Advances in Neural Information Processing Systems (NeurIPS 2025)
- [C3] Xinhe Wang, Pingbang Hu, Junwei Deng, Jiaqi W. Ma, "Adversarial Attacks on Data Attribution". In Proceedings of the 13th International Conference on Learning Representations (ICLR 2025)
- [C4] Yuzheng Hu, Pingbang Hu, Han Zhao, Jiaqi W. Ma, "Most Influential Subset Selection: Challenges, Promises, and Beyond". In Proceedings of the 38th Advances in Neural Information Processing Systems (NeurIPS 2024)
- [C5] Junwei Deng*, Ting-Wei Li*, Shiyuan Zhang, Yijun Pan, Hao Huang, Xinhe Wang, Pingbang Hu, Xingjian Zhang, Jiaqi W. Ma, "dattri: A Library for Efficient Data Attribution". In Proceedings of the 38th Advances in Neural Information Processing Systems Datasets and Benchmarks Track (NeurIPS 2024) (Spotlight)

- [P1] Junwei Deng*, Yuzheng Hu*, Pingbang Hu*, Ting-Wei Li*, Shixuan Liu*, et al., "A Survey of Data Attribution: Methods, Applications, and Evaluation in the Era of Generative AI". In submission
- [P2] Pingbang Hu, Mahito Sugiyama, "Pseudo-Non-Linear Data Augmentation via Energy Minimization". In submission
- [T1] Pingbang Hu, "Travel the Same Path: A Novel TSP Solving Strategy". Technical Report 🕒

TEACHING EXPERIENCE

Graduate Teaching Assistant, University of Illinois Urbana-Champaign

Illinois

Hold discussion and office hours weekly, design assignments and exam problems, grade and guide projects.

• Network Analysis: A graduate-level course on the M.S. IS track.

Spring 2025

Instructional Aide, University of Michigan

Michigan

Hold discussion and office hours weekly, design assignments and exam problems, grade and guide projects.

• Introduction to Cryptography: An upper-level course on the main undergraduate CS track.

Winter 2023

• Randomness and Computation: A graduate-level course on the M.S. CS theory track.

Fall 2022

Teaching Assistant, Shanghai Jiao Tong University

Shanghai, China

 $Hold\ discussion\ and\ office\ hours\ weekly,\ design\ and\ grade\ assignments\ and\ exams.$

o Honor Mathematics III: An undergraduate-level course on the main B.Eng. ECE track.

Summer 2021

* Competition: Hold the 1st UM-SJTU JIntegration Bee competition.

• Honor Mathematics II: An undergraduate-level course on the main B.Eng. ECE track.

Fall 2020

Honors and Awards

Anthropic AI Safety Research Fellowship

San Francisco

Fellows (32 out of 2000+ applicants worldwide) for AI Safety Research at Anthropic

Oct. 2025

Graduate Conference Travel Award

Illinois
Nov. 2024

Graduate College's Competition at University of Illinois Urbana-Champaign

British Columbia, Canada

NeurIPS 2024 Scholar Award Financial Aid Award for NeurIPS 2024

Oct. 2024

Excellent Internship Award

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Excellent (best) internship evaluation at National Institute of Informatics

Aug. 2024

Tokyo, Japan

Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship

Shanghai, China Oct. 2021

First Prize (Ranked #2) among all HK, MC, and TW students at Shanghai Jiao Tong University

Shanghai, China

Undergraduate Excellent Scholarship

Third Prize among all students at UM-SJTU Joint Institute

Nov. 2020

Bao Gang Excellent Scholarship

Second Prize (Ranked #3) among all Taiwan students at Shanghai Jiao Tong University

Shanghai, China

Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship

First Prize (Ranked #1) among all HK, MC, and TW students at UM-SJTU Joint Institute

June 2020

Dec. 2019

Shanghai, China

PROFESSIONAL SERVICE

Program Committee

' AAAI 2025

Conference Reviewer

* ICLR 2026, NeurIPS 2025, ICLR 2025, ICML 2024, IEEE BigData 2023