Pingbang Hu

✉ pbb@illinois.edu
📱 (+1) 734 882 7750

RESEARCH INTEREST

Machine Learning
- *Explainable Machine Learning, Trustworthy Machine Learning, Graph Learning, Statistical Learning Theory*

Theoretical Computer Science
- *Fast Graph Algorithm, Approximation Algorithm, Hardness of Approximation, Learning Theory*

EDUCATION

University of Illinois Urbana-Champaign — **Illinois**
- *Ph.D. Student in Information Science, School of Information Science* — *Aug. 2023–Present*
  - **Advisor**: Jiaqi Ma
  - **Minor**: Statistics, College of Liberal Arts & Sciences

University of Michigan — **Michigan**
- *B.Sc. in Computer Science with Summa Cum Laude, College of Engineering* — *Aug. 2021–May 2023*
  - **Minor**: Mathematics, College of Literature, Science, and the Arts

National Yang Ming Chiao Tung University — **Hsinchu, Taiwan**
- *Visiting Scholar* — *Jan. 2020–Jul. 2020*

Shanghai Jiao Tong University — **Shanghai, China**
- *B.Eng. in Electrical and Computer Engineering, UM-SJTU Joint Institute* — *Aug. 2019–Aug. 2023*
  - **Minor**: Computer Science, UM-SJTU Joint Institute

RESEARCH AND INDUSTRY EXPERIENCE

Sugiyama Laboratory, National Institute of Informatics — **Tokyo, Japan**
- *Research Intern* — *May 2024–Aug. 2024*
  - **Advisor**: Mahito Sugiyama

Theory of Computation Laboratory, University of Michigan — **Michigan**
- *Undergraduate Researcher* — *Mar. 2022–Dec. 2023*
  - **Advisor**: Thatchaphol Saranurak

SURE Program, University of Michigan — **Michigan**
- *Undergraduate Researcher* — *May 2022–Apr. 2023*
  - **Advisor**: Wei Hu

FORESEER Research Group, University of Michigan — **Michigan**
- *Undergraduate Research Assistant* — *Dec. 2021–Jan. 2023*
  - **Advisor**: Jiaqi Ma

Chief Noob — **Shanghai, China**
- *Backend Developer* — *Oct. 2020–June 2021*

PEER-REVIEWED CONFERENCE PUBLICATIONS
(* denotes equal contribution)

[C1] Yuzheng Hu, **Pingbang Hu**, Han Zhao, Jiaqi Ma, "Most Influential Subset Selection: Challenges, Promises, and Beyond". In *Proceedings of the 38th Advances in Neural Information Processing Systems* (NeurIPS 2024) (25.8% accepted rate) 🅟

[C2] Junwei Deng*, Ting-Wei Li*, Shiyuan Zhang, Yijun Pan, Hao Huang, Xinhe Wang, **Pingbang Hu**, Xingjian Zhang, Jiaqi 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**) 🅟

[C3] Xinhe Wang, **Pingbang Hu**, Junwei Deng, Jiaqi Ma, "Adversarial Attacks on Data Attribution". In *Proceedings of the 13th International Conference on Learning Representations* (ICLR 2025) 🅟

PRE-PRINTS AND TECHNICAL REPORTS
(* denotes equal contribution)

[P1] **Pingbang Hu**, Mahito Sugiyama, "Pseudo-Non-Linear Data Augmentation via Energy Minimization". *In submission* 🅟

[P2] Yiwen Tu*, **Pingbang Hu***, Jiaqi Ma, "Towards Reliable Empirical Machine Unlearning Evaluation: A Game-Theoretic View". *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 hour weekly, design assignment 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 hour weekly, design assignment 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 hour weekly, design and grade assignments and exams.*
  - **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

Graduate Conference Travel Award | **Illinois**

- *Graduate College's Competition at* University of Illinois Urbana-Champaign — *Nov. 2024*

NeurIPS 2024 Scholar Award | **British Columbia, Canada**

- *Financial Aid Award for* NeurIPS 2024 — *Oct. 2024*

Excellent Internship Award | **Tokyo, Japan**

- *Excellent (best) internship evaluation at* National Institute of Informatics — *Aug. 2024*

Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship | **Shanghai, China**

- *First Prize (Ranked #2) among all HK, MC and TW students at* Shanghai Jiao Tong University — *Oct. 2021*

Undergraduate Excellent Scholarship | **Shanghai, China**

- *Third Prize among all students at* UM-SJTU Joint Institute — *Nov. 2020*

Bao Gang Excellent Scholarship | **Shanghai, China**

- *Second Prize (Ranked #3) among all Taiwan students at* Shanghai Jiao Tong University — *June 2020*

Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship | **Shanghai, China**

- *First Prize (Ranked #1) among all HK, MC and TW students at* UM-SJTU Joint Institute — *Dec. 2019*

Professional Service

Program Committee
- *AAAI 2025*

Conference Reviewer
- *ICML 2024, IEEE BigData 2023, ICLR 2025*