

RESEARCH INTEREST

- Machine Learning
 - Explainable Machine Learning, Trustworthy Machine Learning, Algorithmic Fairness, Graph Learning, Statistical Learning Theory
- Theoretical Computer Science
 - Fast Graph Algorithm, Approximation Algorithm, Computational Complexity, Hardness of Approximation

EDUCATION

- University of Illinois Urbana-Champaign Illinois
 - Ph.D. Student in Information Science, School of Information Science Aug. 2023 – Present
 - Advisor: Jiaqi Ma
- University of Michigan Michigan
 - B.Sc. in Computer Science, College of Engineering Aug. 2021 – May 2023
 - Graduate with *Summa Cum Laude*
 - 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 – Present
 - Advisor: Thatchaphol Saranurak
 - Design the first almost linear time algorithm on finding minimal balanced separator.
- SURE Program, University of Michigan Michigan
 - Undergraduate Researcher May 2022 – Apr. 2023
 - Advisor: Wei Hu
 - Theoretical analysis on intrinsic dimension under isoperimetry assumptions.
- FORESEER Research Group, University of Michigan Michigan
 - Undergraduate Research Assistant Dec. 2021 – Jan. 2023
 - Advisor: Jiaqi Ma
 - Prove the asymptotic separability of a 1-layer GCN on node classification tasks.
- 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)

- [P1] **Pingbang Hu**, Mahito Sugiyama, “Pseudo-Non-Linear Data Augmentation via Energy Minimization”. *Preprint*
- [P2] 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”. *Preprint*
- [P3] Xinhe Wang, **Pingbang Hu**, Junwei Deng, Jiaqi Ma, “Adversarial Attacks on Data Attribution”. *Preprint* 
- [P4] Yiwen Tu*, **Pingbang Hu***, Jiaqi Ma, “Towards Reliable Empirical Machine Unlearning Evaluation: A Game-Theoretic View”. *In submission* 
- [P5] **Pingbang Hu**, “Travel the Same Path: A Novel TSP Solving Strategy”. *Preprint* 

TEACHING EXPERIENCE

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| Instructional Aide, University of Michigan | Michigan |
| <ul style="list-style-type: none"> Hold discussion and office hour weekly, design assignment and exam problems, grade and guide projects. <ul style="list-style-type: none"> Introduction to Cryptography: An upper-level course on the main undergraduate CS track. <i>Winter 2023</i> Randomness and Computation: A graduate-level course on the M.S. CS theory track. <i>Fall 2022</i> | |
| Teaching Assistant, Shanghai Jiao Tong University | Shanghai, China |
| <ul style="list-style-type: none"> Hold discussion and office hour weekly, design and grade assignments and exams. <ul style="list-style-type: none"> Honor Mathematics III: An undergraduate-level course on the main B.Eng. ECE track. <i>Summer 2021</i> <ul style="list-style-type: none"> * Competition: Hold the 1st UM-SJTU JIntegration Bee competition. Honor Mathematics II: An undergraduate-level course on the main B.Eng. ECE track. <i>Fall 2020</i> | |

HONORS AND AWARDS

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| Excellent Internship Evaluation | Tokyo, Japan |
| Best internship evaluation result in National Institute of Informatics | <i>Aug. 2024</i> |
| Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship | Shanghai, China |
| First Prize (Ranked #2) among all HK, MC and TW students in Shanghai Jiao Tong University | <i>Oct. 2021</i> |
| Undergraduate Excellent Scholarship | Shanghai, China |
| Third Prize among all students in UM-SJTU Joint Institute | <i>Nov. 2020</i> |
| Bao Gang Excellent Scholarship | Shanghai, China |
| Second Prize (Ranked #3) among all Taiwan students in Shanghai Jiao Tong University | <i>June 2020</i> |
| Hong Kong, Macao and Taiwan Overseas Chinese Student Scholarship | Shanghai, China |
| First Prize (Ranked #1) among all HK, MC and TW students in UM-SJTU Joint Institute | <i>Dec. 2019</i> |

PROFESSIONAL SERVICE

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