

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) 
- [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**) 

- [P1] **Pingbang Hu**, Mahito Sugiyama, “Pseudo-Non-Linear Data Augmentation via Energy Minimization”. *In submission*
- [P2] Xinhe Wang, **Pingbang Hu**, Junwei Deng, Jiaqi Ma, “Adversarial Attacks on Data Attribution”. *In submission* 
- [P3] 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

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| 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 1 st UM-SJTU JIntegration Bee competition . | |
| ◦ Honor Mathematics II : An undergraduate-level course on the main B.Eng. ECE track. | Fall 2020 |

HONORS AND AWARDS

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| Excellent Internship Evaluation | Tokyo, Japan |
| ▪ Best internship evaluation result in 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 in Shanghai Jiao Tong University | Oct. 2021 |
| Undergraduate Excellent Scholarship | Shanghai, China |
| ▪ Third Prize among all students in UM-SJTU Joint Institute | Nov. 2020 |
| Bao Gang Excellent Scholarship | Shanghai, China |
| ▪ Second Prize (Ranked #3) among all Taiwan students in 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 in UM-SJTU Joint Institute | Dec. 2019 |

PROFESSIONAL SERVICE

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