

HE, PENGFEI

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SUMMARY

Second year Ph.D student of Computer Science and Engineering at Michigan State University.

Research interests include adversarial learning, machine learning model robustness, machine learning theory.

EDUCATION

- Ph.D., Computer Science and Engineering, Michigan State University, Advisor: Dr. Jiliang Tang, 2022 to Present
- Ph.D., Probability and Statistics, Michigan State University, Advisor: Dr. Yuehua Cui and Dr. Haolei Weng, 2020 to present
- Master., Statistics, University of Wisconsin-Madison, 2019 to 2020
- Bachelor., Mathematics, Nankai University, China, 2015 to 2019

PUBLICATIONS

Google Scholar: <https://scholar.google.com/citations?user=nsSrd6kAAAAJ&hl=en>

Conference and Journal Publications

- Pengfei He, Haochen Liu, Xiangyu Zhao, Jiliang Tang. **PROPN: Personalized Probabilistic Strategic Parameter Optimization in Recommendations** In the Proceedings of 31st ACM International Conference on Information & Knowledge Management, 2022.
- Pengfei He, Nicolas Garcia Trillos, Chenghui Li **Large Sample Spectral Analysis of Graph-based Multi-manifold Clustering** Journal of Machine Learning Research, 2023
- Han Xu, Pengfei He, Jie Ren, Yuxuan Wan, Zitao Liu, Jiliang Tang. **Probabilistic Categorical Adversarial Attack & Adversarial Training**, In the Proceedings of 40th International Conference on Machine Learning, 2023
- Margret V. Bjarnadottir, Siddharth Chandra, Pengfei He and Greg Midgette. **Analyzing Illegal Psychostimulant Trafficking Networks Using Noisy and Sparse Data**, IJSE Transactions, 2023

Preprints and Submissions

- Pengfei He, Han Xu, Jie Ren, Yingqian Cui, Charu C. Aggarwal, Jiliang Tang. **Sharpness-Aware Data Poisoning Attack**
- Yingqian Cui, Jie Ren, Han Xu, Pengfei He, Hui Liu, Lichao Sun, Jiliang Tang. **DiffusionShield: A Watermark for Copyright Protection against Generative Diffusion Models**
- Pengfei He, Han Xu, Yue Xing, and Jie Ren, Yingqian Cui, Shenglai Zeng, Jiliang Tang, Makoto Yamada, Mohammad Sabokrou. **Confidence-driven Sampling for Backdoor Attacks**
- Yingqian Cui, Jie Ren, Yuping Lin, and Han Xu, Pengfei He, Yue Xing, Wenqi Fan, Hui Liu, Jiliang Tang. **FT-Shield: A Watermark Against Unauthorized Fine-tuning in Text-to-Image Diffusion Models**
- Han Xu, Jie Ren, Pengfei He, and Shenglai Zeng, Yingqian Cui, Amy Liu, Hui Liu, Jiliang Tang. **On the Generalization of Training-based ChatGPT Detection Methods**
- Shenglai Zeng, Yaxin Li, Jie Ren, and Yiding Liu, Han Xu, Pengfei He, Yue Xing, Shuaiqiang Wang, Jiliang Tang, Dawei Yin. **Exploring Memorization in Fine-tuned Language Models**

OTHER WORKING EXPERIENCES

Researching

Research Scientist at James Madison College, Michigan State university, December 2021 - August 2022

Visiting research student at Okinawa Institute of Science and Technology (OIST), May 2023 - July 2023

TEACHING AND MENTORING EXPERIENCE

- Fall 2019 - Graduate Teaching Assistant for Introductory Applied Statistics for Engineers. University of Wisconsin-Madison.
- Fall 2020/Spring 2021 - Graduate Teaching Assistant for Statistical Methods. Michigan State University.
- Summer 2021 - Graduate Teaching Assistant for Statistics for Scientists. Michigan State University.
- Fall 2021 - Graduate Teaching Assistant for Fundamentals of Data Science Methods, Probability and Statistics II: Statistics, Bayesian Statistical Methods. Michigan State University.

AWARDS AND SERVICES

- Recipient of Second Prize, Nankai University, September 2016
- Ranked Top 5% in the department of statistics, Nankai University, September 2019
- Awarded the Professor James Stapleton Prize in Statistics, Michigan State University, Fall 2021
- KDD-2022 Student Registration Award
- CIKM-2022 Student Registration Award
- Serve as PC Members: AAAI-2022
- Serve as PC Members: AAAI-2023
- Serve as PC Members: SDM-2024
- Serve as PC Members: KDD-2023

- Serve as PC Members: PAKDD-2023
- Serve as sub-reviewers: SDM-2023
- Serve as journal reviewers: Journal of the American Statistical Association, 2022
- Serve as volunteer: KDD-2022
- Member of International Volunteer HQ: Spent a month volunteering in Romania and helping hold summer camps for local children