Zhimeng JIANG

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Research Interests and Highlights

- My research is in machine learning, with particular emphasis on Fairness AI, robustness, and graph neural networks. Recently, I am also interested in (large) language model alignment and efficient machine learning.

- I have published multiple papers in top-tier conferences, such as ICML, ICLR, WWW, IJCAI, and CIKM.

- My research has been recognized with Outstanding paper award at ICML'22 and Best Demo Paper Award at CIKM'22.

Education

08/2019–12/2023	Texas A&M University (TAMU) Ph.D student in Computer Science	Dept. of Computer Science & Engineering Advisor: Dr. Xia (Ben) Hu
09/2016–06/2019	University of Science and Technology of China (USTC) M.Eng. in Information and Communication Engineering	Dept. of Information Engineering Advisor: Prof. Chen Gong & Zhengyuan Xu
09/2012–06/2016	Harbin Institute of Technology (HIT) Bachelor of Science, Electronic Information Engineering	Dept. of Electrical Engineering GPA: 91.54/100 (top 2% out of 100)

Experience

09/2019–Now, TX

DATA Lab at TAMU University

Graduate Research Assistant, advised by Dr. Xia (Ben) Hu.
○ Conduct research on trustworthy machine learning, including algorithmic fairness over continuous sensitive attributes ([2] ICLR'22), weakly-supervised learning under label noise ([3] ICLR'22), fairness metric rethinking ([9]), and GNN with fair message passing ([7,8]).

10/2022–01/2023, CA

Query Understanding team at Amazon Search

Applied Scientist Intern, mentored by Dr. Xianfeng Tang, Dr. Haoming Jiang and Mr. Jinfeng Yang.
○ Analyze the influence of the climate-friendly tag in query-based recommender system.

05/2022–08/2022, CA

Artificial Intelligence team at Visa Research

Research Intern, mentored by Dr. Huiyuan Chen and Dr. Hao Yang.
○ Develop a new framework to understand node-level impact in Graph Neural Networks.

05/2020–08/2020, CA, Remote

Advertisement AI team at Samsung Research America

Research Intern, mentored by Dr. Li Li and Dr. Rui Chen.
○ Improved the click-through-rate prediction of the production model performance via multi-task learning with multi-level user behavior data.

Selected Publications [Google Scholar]

* indicates co-first author

1. [ICML'23] G. Wang, Z. Liu, **Z. Jiang**, N. Liu, N. Zou, X. Hu, "DIVISION: Memory Efficient Training via Dual Activation Precision", International Conference on Machine Learning, 2023.

2. [ICML'23] H. Ling, **Z. Jiang**, M. Liu, S. Ji, N. Zou, "Graph Mixup with Soft Alignments", International Conference on Machine Learning, 2023.

3. [IJCAI'23] H. Chen, K. Zhou, X. Li, M. Pan, **Z. Jiang**, M. Yeh, Y. Zheng, X. Hu, H. Yang, "Probabilistic Masked Attention Networks for Next-item Recommendation", IJCAI, 2023.

4. [ICLR'23] H. Ling, **Z. Jiang**, Y. Luo, S. Ji, N. Zou, "Learning Fair Graph Representations via Automated Data Augmentations", International Conference on Learning Representations, 2023. [Spotlight]

5. [WWW'23] J. Dong, Q. Zhang, X. Huang, K. Duan, Q. Tan, **Z. Jiang**, "Hierarchy-Aware Multi-Hop Question Answering over Knowledge Graphs", The Web Conference, 2023

6. [ICML'22] X. Han, **Z. Jiang**, N. Liu, X. Hu, "G-Mixup: Graph Augmentation for Graph Classification", International Conference on Machine Learning, 2022. [Outstanding paper award].

7. [ICLR'22] **Z. Jiang**, K. Zhou, Z. Liu, L. Li, R. Chen, S. Choi, X. Hu, "An Information Fusion Approach to Learning with Instance-Dependent Label Noise", International Conference on Learning Representations, 2022.

8. [ICLR'22] **Z. Jiang**, X. Han, C. Fan, F. Yang, A. Mostafavi, X. Hu, "Generalized Demographic Parity for Group Fairness", International Conference on Learning Representations, 2022.

9. [WWW'22] X. Han, **Z. Jiang**, N. Liu, Q. Song, J. Li, X. Hu, "Geometric Graph Representation Learning via Maximizing Rate Reduction", The Web Conference, 2022.

10. [CIKM'22 demo] **Z. Jiang***, G. Wang*, Z. Bhat*, Y. Chen*, D. Zha*, A. Reyes*, A. Niktash, G. Ulkar, E. Okman, X. Hu, "BED: A Real-Time Object Detection System for Edge Devices", CIKM 2022 (demo). [Best Demo Paper Award]

11. [KDDExpo] **Z. Jiang**, K. Zhou, M. Zhang, R. Chen, X. Hu, S. Choi, "Risk-Aware Reinforcement Learning Based Bid Optimization", SIGKDD Explorations Newsletter, 2023. (Also presented in AAAI 2023 @ AI for Web Advertising Workshop.)

Patents

1. **Z. Jiang**, K. Zhou, M. Zhang, R. Chen, X. Hu, S. Choi, "System and methods for bid optimization in real-time bidding." U.S. Patent Application No. 17/676,687, 2023.

HONORS AND AWARDS

ICML'22 Outstanding Paper Award	*Jul. 2022*
CIKM'22 Best Demo Paper Award	*Oct. 2022*
Student Travel Grant Award, Texas A&M University	*Jun. 2022*
Chinese Undergraduates Mathematics Competitions, 1st class (Rank: 6/60k+)	*Mar. 2015*
National Scholarship for Outstanding Graduate Student (top 3%)	*USTC, Oct. 2018*
National Scholarship for Outstanding Graduate Student (top 1%)	*HIT, Sep. 2015*
Outstanding Graduate Students Awards, USTC & Anhui Province	*Apr. 2019*
Outstanding Undergraduate Students Awards	*HIT, Jul. 2016*
China Aerospace Science and Technology Corporation Grants	*HIT, 2013,2014, 2015*

Academic Activities

- Conference Reviewer: NeurIPS'22-23, ICML'22-23, KDD'23, LOG'22, SDM'23, AAAI'23, IJCAI'23, WACV'23

- Journal Reviewer: ACM Transactions on Intelligent Systems and Technology, Neurocomputing, Data Mining and Knowledge Discovery, IEEE Transactions on Information Forensics and Security, Digital Signal Processing, IEEE Communications Letter, IEEE Wireless Communications Letter

- Student Volunteer: ICML'22

- Invited talk: AI Time, Intern Seminar in Visa Research