

# Yaning Jia

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**Address:** 1037 Luoyu Road, Wuhan, China, Huazhong University of Science and Technology

**Research interests** Deep learning, Machine Learning, NLP, Trustworthy AI, fairness

**Education** **Huazhong University with Science and Technology** CN  
Master student in Cyber Space Sep. 2021 – Present  
Advisor: [Prof. Dongmian Zou](#)

**Northeastern University** CN  
Bachelor of Science, Computer Science Sep. 2017 – Jun. 2021  
Outstanding Honor Thesis Award  
GAP: 4.0

**Publications** **Enhancing Node-Level Adversarial Defenses by Lipschitz Regularization of Graph Neural Networks**  
**Yaning Jia**, Dongmian Zou, Hongfei Wang, Hai Jin.  
*The 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 2023

**Stabilizing GNN for Fairness via Lipschitz Bounds**  
**Yaning Jia**, Chunhui Zhang.  
*New Frontiers in Adversarial Machine Learning (AdvML@ICML)*, 2023

**Aligning Relational Learning with Lipschitz Fairness**  
**Yaning Jia**, Chunhui Zhang, Soroush Vosoughi.  
*On Submission (ICLR 2024) & Extension on AdvML@ICML'23 paper*

**Research experience** **Research Assistant** Jun. 2022-Mar. 2023

**Duke University and Duke Kunshan University, US, China**  
Mentors: [Professor Dongmian Zou](#)  
Researched Lipschitz property and proposed a general framework for deep neural networks from the perspective of Lipschitz, which improves the stability of network models and enhances their robustness against adversarial attacks and noisy data. Also, the algorithm can serve as a plug-in component, enhancing the overall robustness of models.

**Research Assistant**

May 2023- Aug. 2023

**Zhejiang Lab, National Lab at Hangzhou, China**Mentors: [Professor Hongyang Chen](#)

Developed a Transformer SVD algorithm tailored for large-scale graph pre-training tasks. which reduces the number of trainable parameters in a large-scale model without compromising model performance. Moreover, reduction in model parameters not only lowers the GPU memory requirements for training but also enhances the efficiency of large-scale pre-training for the model.

**Research Assistant**

Aug. 2023-Present. 2023

**Dartmouth College, US**Mentors: [Professor Soroush Vosoughi](#), [Chunhui Zhang](#)

Developed a novel fairness method for deep neural networks that focuses on ensuring individual fairness. Compared to previous methods, this method, integrated into network models, significantly enhances individual fairness with lower time cost while retaining performance.

**Skills**

**Programming Skills:** C++, Python, java, PyTorch, MATLAB, Git, PyG, DGL.  
**Operating System:** Linux

**Activities****Conference official reviewer**

ICML2023 workshop, KDD2023 workshop ,and NeuIPS 2023 workshop