

Wei Jin

CONTACT INFORMATION	400 Dowman Drive Atlanta, Georgia 30307 Office: Math & Science Center E-mail: wei.jin At emory.edu	Homepage: http://cs.emory.edu/~wjin30 Twitter: https://twitter.com/weisshelter GitHub: https://github.com/ChandlerBang
EMPLOYMENT HISTORY	Emory University Assistant Professor, Department of Computer Science	08/2023 – Present
RESEARCH INTERESTS	<ul style="list-style-type: none">• Deep Learning on Graphs• Data-Centric AI, Data-Efficient Learning• Trustworthy AI: Robustness, Privacy, Fairness• AI for Science, AI for Healthcare	
EDUCATION	Michigan State University, USA <ul style="list-style-type: none">• Ph.D., Computer Science and Engineering• Advisor: Dr. Jiliang Tang Zhejiang University, China <ul style="list-style-type: none">• Bachelor of Engineering, Electronic Information Engineering	08/2019 – 06/2023 09/2015 – 06/2019
INTERNSHIP EXPERIENCE	Search Mission Understanding Team, Amazon Applied Scientist Intern Snap Research, Snap Inc. Research Intern Search Mission Understanding Team, Amazon Applied Scientist Intern Snap Research, Snap Inc. Research Intern	09/2022 – 05/2023 05/2022 – 08/2022 09/2021 – 12/2021 05/2021 – 08/2021
HONORS AND AWARDS	<ul style="list-style-type: none">• KAUST Rising Stars in AI• AAAI New Faculty Highlights• Fitch H. Beach Award (Highest Honor at MSU College of Engineering)• SDM Best Poster Award (Honorable Mention)• MSU Outstanding Graduate Student Award• Snap Research Fellowship• NeurIPS Multimodal Single-Cell Integration Across Time, Individuals, and Batches<ul style="list-style-type: none">– Silver Medal in Kaggle, Top 2% \approx 24/1266• 2nd Place in NeurIPS OGB-LSC Competition, MAG240M Track• WSDM Outstanding Program Committee Member Award• 1st Place in NeurIPS Single-Cell Multimodal Data Integration, Modality Prediction• Most Influential KDD and WWW Papers by Paper Digest	2024 2024 2023 2023 2023 2022 2022 2022 2021 2020

- 10th Place in KDDCup Graph Injection Adversarial Attack & Defense 2020
- Excellent Student of High Education in Zhejiang Province 2019
- Outstanding Graduate in Zhejiang Univeristy 2019
- Provincial Government Scholarship 2018
- Top Ten Outstanding Students of Lantian Academy, Zhejiang University (top 10/2000+) 2017
- 1st Place in 400m Hurdles at Zhejiang University Sports Meet 2016
- 1st Place in 400m at Zhejiang University Sports Meet 2015, 2016
- 1st Place in 4*400m Relay Race at Zhejiang University Sports Meet 2015, 2016

OPEN-SOURCE PROJECTS

- **DeepRobust** [Link]. 05/2020 – Present
A PyTorch adversarial library of attack and defense methods for images and graphs
The first library of adversarial robustness to support graph data
Received 40k+ downloads, 900+ Github stars
- **DANCE** [Link] 10/2022 – Present
A Python toolkit to support deep learning for single-cell gene expression at scale
The first benchmark of computational models for single cell analysis
Received 8k+ downloads

PUBLICATION

- Google Scholar:** <https://scholar.google.com/citations?user=eWow24EAAAAJ&hl=en>
- **Impact:** 2k+ citations, h-index: 22

Book Translation

- Chinese Version of “Deep Learning on Graphs” (Cambridge University Press)
Yiqi Wang, **Wei Jin**.
China Machine Press, 2021
Best Selling Book in JD.com
Invited to give eight lectures based on this book to thousands of attendees

Invited Book Chapter

- “Graph Neural Networks: Self-supervised Learning”
Yu Wang, **Wei Jin**, Tyler Derr.
In “Graph Neural Networks: Foundations, Frontiers, and Applications”. **Springer**. Chapter 18.

Tutorials

- “Augmentation Methods for Graph Learning”
Tong Zhao, Kaize Ding, **Wei Jin**, Gang Liu, Meng Jiang, Neil Shah.
SIAM International Conference on Data Mining (**SDM**), 2023
- “Graph Neural Networks: Models and Applications”
Yiqi Wang, **Wei Jin**, Yao Ma, Jiliang Tang.
SIAM International Conference on Data Mining (**SDM**), 2021
- “Graph Representation Learning: Foundations, Methods, Applications and Systems”
Wei Jin, Yao Ma, Yiqi Wang, Xiaorui Liu, Jiliang Tang, Yukuo Cen, Jiezhong Qiu, Jie Tang, Chuan Shi, Yanfang Ye, Jiawei Zhang, Philip S. Yu.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2021

- “Graph Neural Networks: Models and Applications”
Yao Ma, **Wei Jin**, Yiqi Wang, Tyler Derr, Jiliang Tang.
AAAI Conference on Artificial Intelligence (**AAAI**), 2021.
- “Adversarial Attacks and Defenses: Frontiers, Advances and Practice”
Han Xu, Yaxin Li, **Wei Jin**, Jiliang Tang.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2020
- “Graph Neural Networks: Models and Applications”
Yao Ma, **Wei Jin**, Jiliang Tang, Lingfei Wu, Tengfei Ma.
AAAI Conference on Artificial Intelligence (**AAAI**), 2020

Journal Papers

- “Graph Data Augmentation for Graph Machine Learning: A Survey”
Tong Zhao, **Wei Jin**, Yingheng Wang, Gang Liu, Yozen Liu, Stephan Gunnemann, Neil Shah, Meng Jiang.
IEEE Data Engineering Bulletin, accepted.
- “INS-GNN: Improving Graph Imbalance Learning with Self-Supervision”
Xin Juan, Fengfeng Zhou, Wentao Wang, **Wei Jin**, Jiliang Tang, Xin Wang.
Information Sciences, 2023
- “Adversarial Attacks and Defenses on Graphs”
Wei Jin, Yaxin Li, Han Xu, Yiqi Wang, Shuiwang Ji, Charu Aggarwal, Jiliang Tang.
ACM SIGKDD Explorations Newsletter (**SIGKDD Explorations**), 2021.

Conference Papers

* indicates equal contribution

- “A Comprehensive Survey on Graph Reduction: Sparsification, Coarsening, and Condensation”
Mohammad Hashemi*, Shengbo Gong*, Juntong Ni, Wenqi Fan, B. Aditya Prakash, **Wei Jin**
International Joint Conference on Artificial Intelligence (**IJCAI**), 2024
- “Globally Interpretable Graph Learning via Distribution Matching”
Yi Nian, Yurui Chang, **Wei Jin**, Lu Lin.
International World Wide Web Conference (**WWW**), 2024.
- “CellPLM: Pre-training of Cell Language Model Beyond Single Cells”
Hongzhi Wen, Wenzhuo Tang, Xinnan Dai, Jiayuan Ding, **Wei Jin**, Yuying Xie, Jiliang Tang
International Conference on Learning Representations (**ICLR**), 2024
- “Label-free Node Classification on Graphs with Large Language Models (LLMs)”
Zhikai Chen, Haitao Mao, Hongzhi Wen, Haoyu Han, **Wei Jin**, Haiyang Zhang, Hui Liu, Jiliang Tang
International Conference on Learning Representations (**ICLR**), 2024
- “Amazon-M2: A Multilingual Multi-locale Shopping Session Dataset for Recommendation and Text Generation”
Wei Jin*, Haitao Mao*, Zheng Li, Haoming Jiang, Chen Luo, Hongzhi Wen, Haoyu Han, Hanqing Lu, Zhengyang Wang, Ruirui Li, Zhen Li, Monica Xiao Cheng, Rahul Goutam, Haiyang Zhang, Karthik Subbian, Suhang Wang, Yizhou Sun, Jiliang Tang, Bing Yin, Xianfeng Tang
Neural Information Processing Systems (**NeurIPS**), Track on Datasets and Benchmarks, 2023
- “Demystifying Structural Disparity in Graph Neural Networks: Can One Size Fit All?”
Haitao Mao, Zhikai Chen, **Wei Jin**, Haoyu Han, Yao Ma, Tong Zhao, Neil Shah, Jiliang Tang.
Neural Information Processing Systems (**NeurIPS**), 2023

- “Single-Cell Multimodal Prediction via Transformers”
Wenzhuo Tang, Hongzhi Wen, Renming Liu, Jiayuan Ding, **Wei Jin**, Yuying Xie, Hui Liu, Jiliang Tang.
ACM Conference on Information and Knowledge Management (**CIKM**), 2023
- “Enhancing Graph Representations Learning with Decorrelated Propagation”
Hua Liu*, Haoyu Han*, **Wei Jin**, Xiaorui Liu, Hui Liu.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2023
- “Toward Degree Bias in Embedding-Based Knowledge Graph Completion”
Harry Shomer, **Wei Jin**, Wentao Wang, Jiliang Tang.
Proceedings of the ACM Web Conference (**WWW**), 2023
- “Empowering Graph Representation Learning with Test-Time Graph Transformation”
Wei Jin, Tong Zhao, Jiayuan Ding, Yozen Liu, Jiliang Tang, Neil Shah.
International Conference on Learning Representations (**ICLR**), 2023
- “Jointly Attacking Graph Neural Network and its Explanations”
Wenqi Fan*, Han Xu*, **Wei Jin**, Xiaorui Liu, Xianfeng Tang, Suhang Wang, Qing Li, Jiliang Tang, Jianping Wang, Charu Aggarwal
IEEE International Conference on Data Engineering (**ICDE**), 2023
- “Condensing Graphs via One-Step Gradient Matching”
Wei Jin, Xianfeng Tang, Haoming Jiang, Zheng Li, Danqing Zhang, Jiliang Tang, Bing Yin.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2022
- “Feature Overcorrelation in Deep Graph Neural Networks: A New Perspective”
Wei Jin, Xiaorui Liu, Yao Ma, Charu Aggarwal, Jiliang Tang.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2022
- “Graph Neural Networks for Multimodal Single-Cell Data Integration”
Hongzhi Wen*, Jiayuan Ding*, **Wei Jin***, Yiqi Wang*, Yuying Xie, Jiliang Tang.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2022
1st Place in NeurIPS’21 Single-Cell Multimodal Data Integration, Modality Prediction
- “Graph Trend Networks for Recommendations”
Wenqi Fan, Xiaorui Liu, **Wei Jin**, Xiangyu Zhao, Jiliang Tang, Qing Li.
ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**), 2022
- “Graph Condensation for Graph Neural Networks”
Wei Jin, Lingxiao Zhao, Shichang Zhang, Yozen Liu, Jiliang Tang, Neil Shah.
International Conference on Learning Representations (**ICLR**), 2022
- “Automated Self-Supervised Learning for Graphs”
Wei Jin, Xiaorui Liu, Xiangyu Zhao, Yao Ma, Neil Shah, Jiliang Tang.
International Conference on Learning Representations (**ICLR**), 2022
- “From Stars to Subgraphs: Uplifting Any GNN with Local Structure Awareness”
Lingxiao Zhao, **Wei Jin**, Leman Akoglu, Neil Shah.
International Conference on Learning Representations (**ICLR**), 2022
- “Localized Graph Collaborative Filtering”
Yiqi Wang, Chaozhuo Li, Mingzheng Li, **Wei Jin**, Yuming Liu, Hao Sun, Xing Xie, Jiliang Tang.
SIAM International Conference on Data Mining (**SDM**), 2022
- “Towards Robust Graph Neural Networks for Noisy Graphs with Sparse Labels”
Enyan Dai, **Wei Jin**, Hui Liu, Suhang Wang.
ACM Conference on Web Search and Data Mining (**WSDM**), 2022

- “Graph Neural Networks with Adaptive Residual”
Xiaorui Liu, Jiayuan Ding, **Wei Jin**, Han Xu, Yao Ma, Zitao Liu, Jiliang Tang.
Neural Information Processing Systems (**NeurIPS**), 2021
- “Graph Feature Gating Networks”
Wei Jin, Xiaorui Liu, Yao Ma, Tyler Derr, Charu Aggarwal, Jiliang Tang.
ACM Conference on Information and Knowledge Management (**CIKM**), 2021
- “Graph Representation Learning: Foundations, Methods, Applications and Systems”
Wei Jin, Yao Ma, Yiqi Wang, Xiaorui Liu, Jiliang Tang, Yukuo Cen, Jiezhong Qiu, Jie Tang, Chuan Shi, Yanfang Ye, Jiawei Zhang, Philip S. Yu.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2021
- “Elastic Graph Neural Networks”
Xiaorui Liu*, **Wei Jin***, Yao Ma, Yaxin Li, Hua Liu, Yiqi Wang, Ming Yan, Jiliang Tang.
International Conference on Machine Learning (**ICML**), 2021
Oral (3% \approx 166/5513).
- “The Authors Matter: Understanding and Mitigating Implicit Bias in Deep Text Classification”
Haochen Liu, **Wei Jin**, Hamid Karimi, Zitao Liu, Jiliang Tang.
Association for Computational Linguistics (**ACL**), Findings of ACL, 2021
- “DeepRobust: A Platform for Adversarial Attacks and Defenses”
Yaxin Li*, **Wei Jin***, Han Xu, Jiliang Tang.
In Demonstrations Program of AAAI Conference on Artificial Intelligence (**AAAI**), 2021.
[Library Link]: <https://deeprobust.readthedocs.io/en/latest/>, with **900+ Github stars**
- “Node Similarity Preserving Graph Convolutional Networks”
Wei Jin, Tyler Derr, Yiqi Wang, Yao Ma, Zitao Liu, Jiliang Tang.
ACM Conference on Web Search and Data Mining (**WSDM**), 2021.
- “Graph Mining with Graph Neural Networks”
Wei Jin.
ACM Conference on Web Search and Data Mining (**WSDM**), 2021.
- “Adversarial Attacks and Defenses: Frontiers, Advances and Practice”
Han Xu, Yaxin Li, **Wei Jin**, Jiliang Tang.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2020
- “Graph Structure Learning for Robust Graph Neural Networks”
Wei Jin, Yao Ma, Xiaorui Liu, Xianfeng Tang, Suhang Wang, Jiliang Tang.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**), 2020
Selected as Most Influential Paper in KDD 2020 by Paper Digest [Link]
- “Traffic Flow Prediction via Spatial Temporal Graph Neural Network”
Xiaoyang Wang, Yao Ma, Yiqi Wang, **Wei Jin**, Xin Wang, Jiliang Tang, Caiyan Jia, Jian Yu.
International World Wide Web Conference (**WWW**), 2020
Selected as Most Influential Paper in WWW 2020 by Paper Digest [Link]

TEACHING
EXPERIENCE

- Instructor for CS470 Data Mining at Emory University 2024
- Instructor for CS570 Data Mining at Emory University 2023
- Conference Tutors for SDM’23, KDD’21, SDM’21, AAAI’21, KDD’20, AAAI’20
 - Topics: Graph Neural Networks, Adversarial Robustness
 - Attracted 1k+ attendees in total
- Invited Lecturer for CSE 881 Data Mining (Graduate Level) 2022
 - Lectures on “Network Embedding”

- Lectures on “Graph Neural Networks: A Hands-on Tutorial”
- Primary Instructor for Deep Learning on Graphs at *shenlanxueyuan.com* 2022
 - Lectures on “Deep Learning on Graphs: Foundations”
 - Lectures on “Graph Neural Networks in Practice”
 - Designing eight homework assignments
 - Attracting thousands of attendees
- Teaching Assistant for CSE 320 Computer Organization & Architecture (Undergraduate Level) 2021
 - Duties included online discussions, office hours and grading.

SERVICES

Organizer

- The Web Conference Data-centric Artificial Intelligence Workshop 2024
- KDD Cup: A Multilingual Recommendation Challenge 2023

Senior Program Committee Member

- AAAI Conference on Artificial Intelligence (AAAI) 2022-2023

Conference Session Chair

- SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2023
- International Conference on Neural Information Processing (ICONIP) 2020

Program Committee Member & Conference Reviewer

- European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD) 2024
- International Conference on Machine Learning (ICML) 2023-2024
- SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2022-2024
- The Web Conference (WWW) 2023
- International Conference on Artificial Intelligence and Statistics (AISTATS) 2023
- Conference on Web Search and Data Mining (WSDM) 2021-2023
- Conference on Neural Information Processing Systems (NeurIPS) 2022
- International Conference on Learning Representations (ICLR) 2022
- International Joint Conference on Artificial Intelligence (IJCAI) 2021-2022
- Conference on Information and Knowledge Management (CIKM) 2020-2021
- International Conference on Neural Information Processing (ICONIP) 2020-2021
- AAAI 2020 Workshop on Artificial Intelligence for Education (AI4EDU) 2020

Journal Reviewer

- Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- Neural Networks
- Transactions on Knowledge and Data Engineering (TKDE)
- Neurocomputing

- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- Transactions on Knowledge Discovery from Data (TKDD)
- IEEE Transactions on Computational Social Systems (TCSS)
- ACM Transactions on Privacy and Security (TOPS)
- Social Network Analysis and Mining (SNAM)
- Transactions on Signal and Information Processing over Networks (TSIPN)

Outreach Activity (Mentoring & Volunteering)

- Mentoring at Emory Data Science Club Events 2024
- UNLV & Google ExploreCSR Program 2023
 - Mentoring historically-underrepresented undergraduate students at UNLV
- Women in KDD Workshop: Towards Gender Equity in Tech 2022
- Undergraduate Consortium at KDD 2022
- SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2022
- MSU COGS 13th Annual Graduate Academic Conference 2021
- International Conference on Machine Learning (ICML) 2020-2021
- Conference on Neural Information Processing Systems (NeurIPS) 2020
- SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2020
- AAAI Conference on Artificial Intelligence (AAAI) 2020