Shichang Zhang

Notes

think about what the commitee is looking for

at the end of your research, you can emphasize it results in some pub and was supported by some funding the committee may want to find someone who can secure their own funding

Contact Information

Address: 3320 Sawtelle Blvd, Los Angeles, CA 90066
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Research Interests

Graph Data Mining, Graph Neural Networks (GNNs), Explainable AI, Efficient Machine Learning, Self-Supervised Learning, and Causality

Education

University of California, Los Angeles — Los Angeles, CA

Ph.D. in Computer Science (Advisor: Yizhou Sun) — Expected: 2024

Stanford University — Stanford, CA

M.S. in Statistics — Apr. 2019

University of California, Berkeley — Berkeley, CA

B.A. in Statistics — May 2017
Honors: Honors in Statistics, High Distinction

Honors and Awards

Amazon Fellowship	2023
J.P.Morgan Chase AI PhD Fellowship	2023
Snap Research Fellowship Honorable Mention	2022
ICML Top Reviewer (Top 10%)	2022
UCLA Graduate Division Fellowship	2021

Publications

Shichang Zhang, Atefeh Sohrabizadeh, Cheng Wan, Zijie Huang, Ziniu Hu, Yewen Wang, Yingyan (Celine) Lin, Jason Cong, Yizhou Sun. "A Survey on Graph Neural Network Acceleration: Algorithms, Systems, and Customized Hardware" (preprint)

Shichang Zhang, Jiani Zhang, Xiang Song, Soji Adeshina, Da Zheng, Christos Faloutsos, Yizhou Sun. "PaGE-Link: Graph Neural Network Explanation for Heterogeneous Link Prediction" (**WWW 2023**)

Zhichun Guo, William Shiao, **Shichang Zhang**, Yozen Liu, Nitesh Chawla, Neil Shah, Tong Zhao. "Linkless Link Prediction via Relational Distillation" (**ICML 2023**)

Yewen Wang, **Shichang Zhang**, Junghoo Cho, Yizhou Sun. "Laplacian Score Guided Adaptive Filter Selection for Graph Neural Networks" (preprint)

Shichang Zhang, Yozen Liu, Neil Shah, Yizhou Sun. "Explaining Graph Neural Networks with Structure-Aware Cooperative Games" (**NeurIPS 2022**)

Shichang Zhang, Yozen Liu, Yizhou Sun, Neil Shah. " Graph-less Neural Networks, Teach Old MLPs New Tricks via Distillation" (**ICLR 2022**)

Wei Jin, Lingxiao Zhao, **Shichang Zhang**, Yozen Liu, Jiliang Tang, Neil Shah. " Graph Condensation for Graph Neural Networks" (**ICLR 2022**)

Shichang Zhang, Ziniu Hu, Arjun Subramonian, Yizhou Sun. "Motif-driven Contrastive Learning of Graph Representations" (SSL@WWW2021)

INVITED TALKS	**Graph Neural Network Explanation for Heterogeneous Link Prediction**	
	Amazon Trans.AI Research Talks	July 2023
	International World Wide Web Conference	May 2023
	Structure-Aware Graph Neural Network Explanation	
	AI Time NeurIPS Talk Series	Feb 2023
	Graph-less Neural Networks	
	NVIDIA GNN Reading Group	May 2022

TEACHING EXPERIENCE	**Teaching Assistant**, University of California, Los Angeles	
	CS145: Introduction to Data Mining	Fall 2020, Fall 2021
	CS32: Introduction to Computer Science II	Spring 2021

ACADEMIC SERVICE	**Conference Reviewer/Program Committee**:	
	KDD - ACM SIGKDD Conference on Knowledge Discovery and Data Mining	2020, 2023
	NeurIPS - Advances in Neural Information Processing Systems	2021 - 2023
	ICML - International Conference on Machine Learning	2022 - 2023
	CIKM - ACM Conference on Information and Knowledge Management	2022 - 2023
	AAAI - AAAI Conference on Artificial Intelligence	2023 - 2024
	ICDM - IEEE International Conference on Data Mining	2021
	WSDM - ACM International Web Search and Data Mining Conference	2023

Journal Reviewer:
TPAMI - IEEE Transactions on Pattern Analysis and Machine Intelligence
TKDD - ACM Transactions on Knowledge Discovery from Data
TKDE - IEEE Transactions on Knowledge and Data Engineering
TNNLS - IEEE Transactions on Neural Networks and Learning Systems

MENTORSHIP	Arjun Subramonian (UCLA undergrad → UCLA PhD)	Mar. 2020 - Mar. 2021
	Haoyu Li (UCLA undergrad)	Mar. 2023 - Present
	Qianli Wu (UCLA undergrad)	Mar. 2023 - Present

PROFESSIONAL EXPERIENCE	**Amazon Web Service (AWS)**	Santa Clara, CA
	Applied Scientist Intern, Graph Machine Learning Team	June 2023 - Oct. 2023

- Worked on combining graph data with large language models (LLMs).

Amazon Web Service (AWS)   Santa Clara, CA

Applied Scientist Intern, Graph Machine Learning Team   June 2022 - Oct. 2022

- Proposed a new framework to explain GNN link prediction for recommendation on graph data, which improves user trust in the model and helps developers to debug the model.
- The implemented framework turns will be incorporated into the Amazon Neptune ML project in production. Work published in WWW 2023.

Snap Research   Los Angeles, CA

Research Intern, Computational Social Science Team   June 2021 - Sept. 2021

- Proposed a cross-model distillation framework to transfer knowledge from GNNs to MLPs, which speeds up model inference by 179 times and facilitates model deployment on latency-constraint applications. Work published in ICLR 2022.
- Worked on condensing large-scale training graphs to small synthetic graphs by over 90% reduction rate while maintaining competitive model performance for GNNs trained from scratch, which significantly saves storage space and achieves efficient continue learning. Work published in ICLR 2022.

WeWork Inc.   Palo Alto, CA

Data Scientist Intern, Research and Applied Science Team   June 2019 - Sept. 2019

- Implemented a data processing pipeline in SQL and Python for data querying, data cleaning, and feature engineering.
- Trained a Gradient Boosted Tree model on two million customer data to predict occupancy rate for WeWork buildings and achieved 0.093 MAE on the test set.
- Presented the pricing model as a selected outstanding project to the Research and Applied Science team including the VP.

SKILLS   Programming: Python (PyTorch, PyG, DGL), C++, R, Java, Linux (Ubuntu), Git
Natural Language: Mandarin Chinese (Native), English (Proficient)