Jian-an(Andy) Zhao

Email Homepage Google Scholar

Education

Beijing University of Posts and Telecommunications **Sep. 2013 – Jun. 2017**

Bachelor of Science (Engineering) *BUPT International School, Queen Mary Univ. of London*

- B.Sc with Second-Class Honor at BUPT, majored in Telecommunications Engineering with Management.

Beijing University of Posts and Telecommunications **Sep. 2017 – Jun. 2020**

Master of Science *BUPT School of Computer Science, BUPT GAMMA Lab*

- M.Sc in computer science, advised by Prof.Chuan Shi and Xiao Wang, focused on heterogeneous graph neural networks.

Université de Montréal / Mila-Quebec AI Institute **Sep. 2022 – Present**

PhD of Computer Science

- I'm fortunate to be adviced by Prof.Jian Tang. My research focus on graphs and natural language processing.

Research Experience

Microsoft Research Asia **Jul. 2021 – Jul. 2022**

Research Intern *Social Computing Group*

- My research focus on designing graph transformers advised by Chaozhuo Li and Xing Xie.
- I was awarded the Stars of Tomorrow Certificate (Top 10%).

Case Western Reserve University **Sep. 2020 – Jun. 2021**

Research Assistant *Yes-Lab*

- My research focus on graph neural networks topics including self-supervised learning and graph structure learning.
- I'm fortunate to be advised by Prof. Yanfang Ye and Prof. Chuxu Zhang.

Selected Publications / Manuscripts

Learning on Large-scale Text-attributed Graphs via Variational Inference |PDF, Code **ICLR23 notable top 5%**

- Authors: Jianan Zhao, Meng Qu, Chaozhuo Li, Hao Yan, Qian Liu, Rui Li, Xing Xie, Jian Tang.
- Highlights: Top 1 accuracy of three datasets on the Open Graph Benchmark.

HousE: Knowledge Graph Embedding with Householder Parameterization | PDF, Code **ICML22**

- Authors: Rui Li, Jianan Zhao, Chaozhuo Li, Di He, Xing Xie, et al.
- Highlights: We propose HousE, a generalization of existing rotation-based models while extending the rotations to high-dimensional spaces. HousE achieves new state-of-the-art performance on five benchmark datasets.

Gophormer: Ego-Graph Transformer for Node Classification | PDF, Code **Arxiv Preprint**

- Authors: Jianan Zhao, Chaozhuo Li, Qianlong Wen, Yiqi Wang, Yuming Liu, Hao Sun, Xing Xie, Yanfang Ye.
- Highlights: Gophormer is the SOTA graph transformer for node-level tasks, and is deployed in Microsoft BingAds.

Self-Supervised Graph Structure Refinement for Graph Neural Networks | PDF, Code **WSDM23**

- Authors: Jianan Zhao, Qianlong Wen, Mingxuan Ju, Yanfang Ye, Chuxu Zhang.
- Highlights: The proposed graph structure learning framework GSR is effective (SOTA performance on six benchmark datasets), efficient, and scalable (13.8× faster using 32.8% GPU memory compared to the best GSL baseline on Cora).

RxNet: Rx-refill Graph Neural Network for Overprescribing Detection | PDF **CIKM21**

- Authors: Jianfei Zhang, Ai-Te Kuo, Jianan Zhao, Qianlong Wen, Erin Winstanley, Chuxu Zhang, Yanfang Ye.
- Highlights: RxNet received the CIKM2021 Best Full Paper Award.

Multi-View Self-Supervised Heterogeneous Graph Embedding | PDF, Code **ECML/PKDD21**

- Authors: Jianan Zhao, Qianlong Wen, Shiyu Sun, Yanfang Ye, and Chuxu Zhang.
- Highlights: One of the earliest self-supervised heterogeneous graph embedding works.

Heterogeneous Graph Structure Learning for Graph Neural Networks | PDF, Code **AAAI21**

- Authors: Jianan Zhao, Xiao Wang, Chuan Shi, Binbin Hu, Guojie Song, and Yanfang Ye.
- Highlights: First heterogeneous graph structure learning framework, included in OpenHGNN.

Network Schema Preserving Heterogeneous Information Network Embedding | PDF, Code **IJCAI20**

- Authors: Jianan Zhao, Xiao Wang, Chuan Shi, Zekuan Liu, and Yanfang Ye.
- Highlights: NSHE proposes to capture the network schema proximity and is included in both DGL and OpenHGNN.

Services

- Workshop Organization: Review chair of NeurIPS 2022 Workshop on Temporal Graph Learning.
- Community Service: Founding committee member of the MLNLP community (over 50k subscribers).
- Peer Review: Reviewer for NeurIPS2023, ICML2022, KDD2022, WWW2022, LoG2022, TNNLS 2021-2022, TKDE 2021-2022.
- Open Source Projects: NSHE in DGL and OpenHGNN, HGSL in OpenHGNN.
- Invited Talks: Hete. graph structure learning AI-Drive Webinair; graph transformers at BUPT GAMMA Lab.
- Conference Volunteer: Leading volunteer (in charge of registration center) of CIKM 2019.

Reference Contacts

- Xing Xie, IEEE Fellow, Senior Principal Research Manager at Microsoft Research Asia (xingx@microsoft.com).
- Chuan Shi, Professor at Beijing University of Posts and Telecommunications (shichuan@bupt.edu.cn).