Jian-an(Andy) Zhao

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Education

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

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

- I achieved Master of Science majored in computer science in BUPT advised by Prof.Chuan Shi and Xiao Wang working on heterogeneous graph neural networks.

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

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

- I achieved Bachelor of Science with Second-Class Honor at BUPT (joint program with Queen Mary University of London) majored in Telecommunications Engineering with Management.

Research Experience

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

Visiting Fellow *Social Computing Group*

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

Case Western Reserve University **Aug. 2020 – May 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

HousE: Knowledge Graph Embedding with Householder Parameterization **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 **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.

Prohibited Item Detection via Risk Graph Structure Learning **WWW22**

- Authors: Yugang Ji, Guanyi Chu, Xiao Wang, Chuan Shi, Jianan Zhao.
- Highlights: RGSL has been deployed to Xianyu (the largest second-hand platform in China) with average improvements up to 23.59% in ACC@1000 and 6.52% in ACC@10000.

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 ICML2022, KDD2022, TNNLS 2021-2022, TKDE-2021.
- 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).