

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 – Now

Research Intern

Social Computing Group

- My research focus on designing graph transformers advised by Chaozhuo Li and Xing Xie.
- I also work closely with my colleagues at Microsoft to design graph transformers for Bing Ads.

Case Western Reserve University

Aug. 2020 – May 2021

Research Assistant

Yes-Lab

- My research focus on research related to self-supervised learning, graph neural networks, 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 Bing Ads.

Self-Supervised Graph Structure Refinement for Graph Neural Networks

Arxiv Preprint

- 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

- 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 Webinar; graph transformers at BUPT GAMMA Lab.
- Conference Volunteer: Leading volunteer (in charge of registration center) of CIKM 2019.
- Teaching Assistant: Computer Fundamentals and C Programming (2017-2018 semester).

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).