TIMOTHY(TIANXIANG) ZHAO

Pennsylvania State University, University Park
tkz5084@psu.edu

EDUCATION

University of Science and Technology of China *Sep 2013 - June 2017*
Class of the Gifted Young, School of the Gifted Young
Bachelor in Computer Science

University of Science and Technology of China *Sep 2017 - June 2019*
Software Engineering, School of the Software

Pennsylvania State University *June2019 - present*
College of Information Science and Technology
Advisor: Suhang Wang, Xiang Zhang

RESEARCH BACKGROUNDS

Graph Neural Network, Transfer Learning, Natural Language Processing

RESEARCH EXPERIENCE

NEC Labs May 2022 - Aug 2022
Research Intern in NLP *Princeton, US*

· Mentor: Wenchao Yu
· Focusing on imitation learning with latent skill discovery.
· Research interests: Reinforcement Learning, Imitation Learning, Positive-unlabeled learning

NEC Labs May 2021 - Aug 2021
Research Intern in NLP *Princeton, US*

· Mentor: Wenchao Yu
· Focusing on interpreting RL agents with causality theory.
· Research interests: Causal Discovery, Reinforcement Learning, Imitation Learning

Tencent AI Lab Jan 2019 - June 2019
Research Intern in NLP *Shenzhen, China*

· Mentor: Lemao Liu
· Focusing on applying reinforcement learning to machine translation.
· Research interests: Neural Machine Translation, Reinforcement Learning

SenseTime July 2018 - Jan 2019
Research Intern in Computer Vision *Beijing, China*

· Mentor: Xu Jia, Jing Shao
· Focusing on designing efficient networks to be run on mobile devices.
· Research interests: Domain Adaptation, Knowledge Distillation, Network Architecture

Anhui Province Key Laboratory of Big Data Analysis and Application May 2017 - June 2019

Graduate Student *USTC*

· Supervisor: Guiquan Liu

· Learning basics in convex optimization and machine learning.

· Research interests: Transfer Learning, Domain Adaptation, Zero-shot Learning.

PROJECT EXPERIENCE

Semantic segmentation for remote sensing images Sep 2017 - Nov 2017

· Responsible for design and implement of the algorithm

· Used FCN structure

PUBLICATIONS

Accepted:

1. **Tianxiang Zhao**, Dongsheng Luo, Xiang Zhang, Suhang Wang. "TopoImb: Toward Topology-level Imbalance in Learning from Graphs." Accepted by LOG 2023.
2. **Tianxiang Zhao**, Dongsheng Luo, Xiang Zhang, Suhang Wang. "Towards Faithful and Consistent Explanations for Graph Neural Networks." Accepted by WSDM 2023.
3. **Tianxiang Zhao**, Xiang Zhang, Suhang Wang. "Exploring Edge Disentanglement for Node Classification." Accepted by WebConf 2022 (Previous WWW).
4. Lei Wang, Ee-Peng Lim, Zhiwei Liu, **Tianxiang Zhao**. "Explanation guided contrastive learning for sequential recommendation". Accepted by CIKM 2022.
5. Yuqing Hu, Xiaoyuan Cheng, Suhang Wang, Jianli Chen, **Tianxiang Zhao**, Enyan Dai. "Times series forecasting for urban building energy consumption based on graph convolutional network". Accepted by Applied Energy 2022.
6. **Tianxiang Zhao**, Enyan Dai, Kai Shu, Suhang Wang. "Towards Fair Classifiers Without Sensitive Attributes: ExploringBiases in Related Features." Accepted by WSDM 2022.
7. **Tianxiang Zhao**, Xiang Zhang, Suhang Wang. "GraphSMOTE: Imbalanced Node Classification on Graphs with Graph Neural Networks." Accepted by WSDM 2021.
8. Weijeiying Ren, Kunpeng Liu, **Tianxiang Zhao**, Yanjie Fu. "Fair and effective policing for neighborhood safety: understanding and overcoming selection biases". Accepted by Frontiers in big data 2021.
9. **Tianxiang Zhao**, Xianfeng Tang, Xiang Zhang, Suhang Wang. "Semi-Supervised Graph-to-Graph Translation." Accepted by CIKM 2020.
10. **Tianxiang Zhao**, Lemao Liu, Huayang Li, Guoping Huang, Enhong Chen, Guiquan Liu, Shuming Shi. "Balancing Quality and Human Involvement: An Effective Approach to Interactive Neural Machine Translation." Accepted by AAAI 2020.
11. AS Adishesha, **Tianxiang Zhao**. "Emotion Embedded Pose Generation". ECCV 2020 workshop.
12. **Tianxiang Zhao**, Guiquan Liu, Le Wu, Chao Ma, Enhong Chen. "Energy Based Model for Zero Shot Learning." Accepted by ICDM 2018.
13. Xiaoying Ren, Linli Xu, **Tianxiang Zhao**(second student author), Chen Zhu, Junliang Guo, Enhong Chen. "Tracking and Forecasting Dynamics in Crowdfunding: A Basis-Synthesis Approach." Short paper, Accepted by ICDM 2018.

Under Review:

1. Enyan Dai, **Tianxiang Zhao**, Huaisheng Zhu, Junjie Xu, Zhimeng Guo, Hui Liu, Jiliang Tang, Suhang Wang. "A Comprehensive Survey on Trustworthy Graph Neural Networks: Privacy, Robustness, Fairness, and Explainability"
2. Weijieying Ren, **Tianxiang Zhao**, Pengyang Wang, Hui Xiong. "Robust Pseudo Labeling and Anti-forgetting With Evolving Shifted Data".
3. **Tianxiang Zhao**, Xiang Zhang, Suhang Wang. "Synthetic over-sampling for imbalanced node classification with graph neural networks". arXiv:2206.05335.
4. **Tianxiang Zhao**, Dongsheng Luo, Xiang Zhang, Suhang Wang. "On Consistency in Graph Neural Network Interpretation". arXiv:2205.13733