YILONG WANG

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EDUCATION

The Pennsylvania State University, University Park, USA — Sep 2022- Present
Ph.D. candidate in Informatics, IST Department

University of Minnesota – Twin Cities, Minneapolis, USA — Sep 2021- Aug 2022
Ph.D. candidate in Computer Science(Transferred), CS Department

Technical University of Munich, Munich, Germany — Mar 2019- Aug 2019
Exchange student in Informatics

Zhejiang University, Hangzhou, China — Sep 2016- June 2021
B.Sc. in Computer Science and Technology, Minor in Statistics

PUBLICATION

[1] Bridging Source and Target Domains via Link Prediction for Unsupervised Domain Adaptation on Graphs
Yilong Wang, Tianxiang Zhao, Zongyu Wu, Suhang Wang
WSDM 2025, ACM International Conference on Web Search and Data Mining

[2] SemEval-2020 Task 4: Commonsense Validation and Explanation
Cunxiang Wang, Shuailong Liang, Yili Jin, **Yilong Wang**, Xiaodan Zhu, Yue Zhang
SemEval 2020, the International Workshop on Semantic Evaluation

[3] Trojan Prompt Attacks on Graph Neural Networks
Minhua Lin, Zhiwei Zhang, Enyan Dai, Zongyu Wu, **Yilong Wang**, Xiang Zhang, Suhang Wang
Available on ArXiv [arXiv:2410.13974]

[4] Beyond Global Calibration: Tackling Local Miscalibration in Graph Neural Networks
Yilong Wang, Tianxiang Zhao, Suhang Wang
Under Review

[5] LanPHal: Rethinking the Impact of Language Priors on Hallucinations in Large Vision-Language Models
Zongyu Wu, Yuwei Niu, Hongcheng Gao, Zhifang Zhang, Minhua Lin, Zhiwei Zhang, Qi Shi, **Yilong Wang**, Sike Fu, Junjie Xu, Junjie Ao, Enyan Dai, Lei Feng, Xiang Zhang, Suhang Wang
Under Review

EXPERIENCE

Penn State University — Sep 2022- Present
Research Assistant; Advisor: Suhang Wang — University Park, USA

Calibration Graph Neural Network with Regional Bias Detection

- First to identify and explain the confidence disparity between dense nodes and the overall graph in graph neural networks
- Designed a dynamic region identification algorithm to partition the graph into sub-regions, enabling more effective localized calibration.
- Proposed a novel regional calibration approach, significantly reducing calibration error and enhancing prediction reliability.

Domain Adaptation on Graphs under Label Distribution Shift

- Designed a cross-domain edge prediction mechanism to mitigate label distribution shift and reduce domain discrepancy.

- Proposed and validated a novel graph-based domain adaptation framework, achieving state-of-the-art results on benchmark datasets.

Tool-Augmented Chain of Thought for Enhanced Vision-Language Reasoning

- Designed and implemented a tool-augmented reasoning framework for vision-language models (VLMs), enabling self-assessment of the need for external tools to enhance question answering (QA).
- Validated the framework through extensive experiments, demonstrating significant improvements in QA performance compared to baseline methods.

Amazon Web Services (AWS), Shanghai AI Lab May 2021- Aug 2021
Software Development Engineer Intern; Advisor: Tong He Shanghai, China

Deep Graph Library(DGL) Development

- Collaborated with the team on the development of the Deep Graph Library (DGL) to support scalable graph-based machine learning.
- Assisted in debugging and enhancing core functionalities to ensure seamless integration with machine learning frameworks.

SERVICE

Reviewer

- (KDD)ACM SIGKDD Conference on Knowledge Discovery and Data Mining (2024)
- (CIKM)Conference on Information and Knowledge Management (2024)

TEACHING EXPERIENCE

Teaching Assistant, PSU
DS300(Data Privacy and Security) Fall 2024
IST302(IT Project Management) Spring 2024
DS310(Machine Learning and Data Analysis) Spring 2023

SKILLS

Language: English (Fluent), Mandarin (Native)

Programming Language: Python, C, C++, Java

Deep Learning Framework: Pytorch, Tensorflow, PyTorch Geometric, DGL