Han Wang

hanwang3301@gmail.com

Education

Zhejiang University, *Hang Zhou, China* Sept. 2020 – Jun. 2024
Undergraduate in Electronic Information Engineering *GPA:3.94/4.00*

Research Interests

Trustworthy Machine Learning, Foundation Model Safety and Security

Research Experience

Graph-Theoretic Understanding for OOD Generalization and Detection May 2023 – Oct. 2023
Advisor: Asst. Prof. Sharon Yixuan Li, University of Wisconsin-Madison *Under Review*

- Propose a novel graph-theoretical framework for understanding both OOD generalization and detection
- Present theoretical insight by analyzing closed-form solutions for the OOD generalization and detection error
- Evaluate the performance through a set of experiments and provide empirical evidence of robustness and alignment with our theoretical analysis

Disentangling MAE for Unsupervised Domain Generalization Oct. 2022 – May 2023
Advisor: Prof. Tat-Seng Chua, National University of Singapore, NExT++ Lab *Under Review*

- Devise a disentangling MAE framework to discover the disentangled representations that faithfully reveal the intrinsic features and superficial variations in an unsupervised manner
- Demonstrate the effectiveness beyond state-of-the-art unsupervised domain generalization methods and domain generalization methods

Weakly-supervised Spatio-temporal Video Grounding Jun. 2022 – Dec. 2022
Advisor: Prof. Fei Wu, Zhejiang University, DCD Lab *CVPR 2023*

- Present a novel perspective of hierarchical video language decomposition and alignment to alleviate spurious correlations brought by limited annotations
- Introduce a framework that encapsulates the structural attention and top-down backtracking for hierarchical understanding, using multi-hierarchy contrastive learning
- Outperform state-of-the-art weakly supervised methods, even surpass some supervised methods

Publications & Manuscripts

- Mengze Li*, **Han Wang***, Wenqiao Zhang, Jiaxu Miao, Wei Ji, Zhou Zhao, Shengyu Zhang, Fei Wu. Winner: weakly-supervised hierarchical decomposition and alignment for spatio-temporal video grounding. *In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2023.*

Honors

School of Electrical Engineering NR Scholarship, Zhejiang University Oct. 2023
Zhejiang University Scholarship - Second Prize (Top 8%) Oct. 2023
Zhejiang Province Government Scholarship Nov. 2022
Zhejiang University Scholarship - Second Prize (Top 8%) Oct. 2022
Zhejiang University Scholarship - First Prize (Top 3%) Oct. 2021

Skills

Programming Skills: Python, C/C++, Matlab, CUDA, VHDL/Verilog
Language Skills: Chinese (Native), English (Fluent, TOEFL iBT 100/120)