

Ziming Wei

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Research Interests

Multi-modal Understanding and Generation, Embodied AI, Spatial Intelligence, AI Agents.

Education

Sun Yat-sen University, BS in Intelligent Science and Technology Sept 2020 – June 2024

• GPA: 4.03/5.0 (Ranking: 3/226, Top 1%)

Sun Yat-sen University, Master in Control Science and Engineering Sept 2024 – June 2027

• Advisor: Prof. Xiaodan Liang; **Weighted Average Score**: 91.74/100.0

Publications

(* denotes Co-first Authors, † denotes Corresponding Author.)

[1] Unseen from Seen: Rewriting Observation-Instruction Using Foundation Models for Augmenting Vision-Language Navigation

(*IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2025)

Ziming Wei*, Bingqian Lin*, Yunshuang Nie, Jiaqi Chen, Shikui Ma, Hang Xu, Xiaodan Liang†

[2] MineAnyBuild: Benchmarking Spatial Planning for Open-world AI Agents

(*Conference on Neural Information Processing Systems (NeurIPS)*, 2025)

Ziming Wei*, Bingqian Lin*, Zijian Jiao*, Yunshuang Nie, Liang Ma, Yuecheng Liu, Yuzheng Zhuang, Xiaodan Liang†

[3] NavCoT: Boosting LLM-Based Vision-and-Language Navigation via Learning Disentangled Reasoning

(*IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2025)

Bingqian Lin*, Yunshuang Nie*, Ziming Wei, Jiaqi Chen, Shikui Ma, Jianhua Han, Hang Xu, Xiaojun Chang, Xiaodan Liang†

[4] Correctable Landmark Discovery via Large Models for Vision-Language Navigation

(*IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2024)

Bingqian Lin*, Yunshuang Nie*, Ziming Wei, Yi Zhu, Hang Xu, Shikui Ma, Jianzhuang Liu, Xiaodan Liang†

[5] EvolveNav: Self-Improving Embodied Reasoning for LLM-Based Vision-Language Navigation

(*In submission to TPAMI, Under Review*)

Bingqian Lin*, Yunshuang Nie*, Khun Loun Zai, Ziming Wei, Mingfei Han, Rongtao Xu, Minzhe Niu, Jianhua Han, Liang Lin†, Cewu Lu†, Xiaodan Liang†

[6] PhyBlock: A Progressive Benchmark for Physical Understanding and Planning via 3D Block Assembly

(*Conference on Neural Information Processing Systems (NeurIPS)*, 2025)

Liang Ma*, Jiajun Wen*, Min Lin*, Rongtao Xu*, Xiwen Liang*, Bingqian Lin, Jun Ma, Yongxin Wang, Ziming Wei, Haokun Lin, Mingfei Han, Meng Cao, Bokui Chen†, Ivan Laptev, Xiaodan Liang†

Experience

Research Intern, Huawei Noah's Ark Lab, Shenzhen, Guangdong, China Apr 2025 – Present

Mentor: Yuecheng Liu, Yuzheng Zhuang

Data Engineering Intern, Tencent SSV, Shenzhen, Guangdong, China July 2023 – Nov 2023

Mentor: Hangyu Li

Awards

- First Class Award Scholarship of the Graduate School, Sun Yat-sen University, in 2024, 2025
- Excellent Bachelor Dissertation Award of Sun Yat-sen University, in 2024 (**Top 1 Recommended**)
- Third Class Award Scholarship of Sun Yat-sen University Excellent Student, Sun Yat-sen University, China, in 2020-2021, 2021-2022 and 2022-2023