

Bingqian Lin

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Research Interests

My research interest lies in **Multi-modal understanding**, **Embodied AI**, and **Computer vision**. Currently, I am focusing on building generalist embodied agents driven by foundation models and the world model theory.

Education

Shanghai Jiao Tong University <i>Postdoctoral in Computer Science</i> Advisor: Prof. Cewu Lu	Jul 2024 – Present
Sun Yat-sen University <i>phD in Electronic Information Engineering</i> Advisor: Prof. Xiaodan Liang	Sep 2019 – Jun 2024
Xiamen University <i>Master in Computer Science</i> Advisor: Prof. Cuihua Li	Sep 2016 – Jun 2019
University of Electronic Science and Technology of China <i>Bachelor in Computer Science</i>	Sep 2012 – Jun 2016

Publications

- [1] Correctable Landmark Discovery via Large Models for Vision-Language Navigation, *TPAMI 2024*
Bingqian Lin*, Yunshuang Nie*, Ziming Wei, Yi Zhu, Hang Xu, Shikui Ma, Jianzhuang Liu, Xiaodan Liang
- [2] Towards Deviation-robust Agent Navigation via Perturbation-aware Contrastive Learning, *TPAMI 2023*
Bingqian Lin*, Yanxin Long*, Yi Zhu, Fengda Zhu, Xiaodan Liang, Qixiang Ye, Liang Lin
- [3] Actional Atomic-Concept Learning for Demystifying Vision-Language Navigation, *AAAI 2023*
Bingqian Lin, Yi Zhu, Xiaodan Liang, Liang Lin, Jianzhuang Liu
- [4] ADAPT: Vision-Language Navigation with Modality-Aligned Action Prompts, *CVPR 2022*
Bingqian Lin, Yi Zhu, Zicong Chen, Xiwen Liang, Jianzhuang Liu, Xiaodan Liang
- [5] Adversarial Reinforced Instruction Attacker for Robust Vision-Language Navigation, *TPAMI 2021*
Bingqian Lin, Yi Zhu, Yanxin Long, Xiaodan Liang, Qixiang Ye, Liang Lin
- [6] Atom Correlation Based Graph Propagation for Scene Graph Generation, *Pattern Recognition 2021*
Bingqian Lin, Yi Zhu, Xiaodan Liang
- [7] Heterogeneous Excitation-and-Squeeze Network for Visual Dialog, *NeuroComputing 2021*
Bingqian Lin, Yi Zhu, Xiaodan Liang
- [8] Joint Deep Multi-View Learning for Image Clustering, *TKDE 2020*
Yuan Xie*, **Bingqian Lin***, Yanyun Qu, Cuihua Li, Wensheng Zhang, Lizhuang Ma, Yongang Wen, Dacheng Tao
- [9] DeepTongue: Tongue Segmentation via ResNet, *ICASSP 2018*
Bingqian Lin, Yanyun Qu, Junwei Xie, Cuihua Li
- [10] MapGPT: Map-Guided Prompting with Adaptive Path Planning for Vision-and-Language Navigation, *ACL 2024*
Jiaqi Chen, **Bingqian Lin**, Ran Xu, Zhenhua Chai, Xiaodan Liang, Kwan-Yee K.Wong
- [11] Dynamic Graph Enhanced Contrastive Learning for Chest X-ray Report Generation, *CVPR 2023*
Mingji Li, **Bingqian Lin**, Zicong Chen, Haokun Lin, Xiaodan Liang, Xiaojun Chang
- [12] RelCLIP: Adapting Language-Image Pretraining for Visual Relationship Detection via Relational Contrastive Learning, *EMNLP 2022*
Yi Zhu*, Zhaoqing Zhu*, **Bingqian Lin**, Xiaodan Liang, Feng Zhao, Jianzhuang Liu
- [13] Configurable Graph Reasoning for Visual Relation Detection, *TNNLS 2020*
Yi Zhu, Xiwen Liang, **Bingqian Lin**, Jianbin Jiao, Qixiang Ye, Liang Lin, Xiaodan Liang
- [14] Patch Proposal Network for Fast Semantic Segmentation of High-Resolution Images, *AAAI 2020*
Tong Wu*, Zhenzhen Lei*, **Bingqian Lin**, Cuihua Li, Yanyun Qu, Yuan Xie
- [15] Contrastive Instruction-Trajectory Learning for Vision-Language Navigation, *AAAI 2022*

Xiwen Liang, Fengda Zhu, Yi Zhu, **Bingqian Lin**, Bing Wang, Xiaodan Liang

[16] Vision-Dialog Navigation by Exploring Cross-modal Memory, *CVPR 2020*

Yi Zhu, Fengda Zhu, Zhaohuan Zhan, **Bingqian Lin**, Jianbin Jiao, Xiaojun Chang, Xiaodan Liang

Research Experience

Machine Vision and Intelligence Group, Shanghai Jiao Tong University

Jul 2024 – Present

- Working with Prof. Cewu Lu
- Working on foundation models driven robotic navigation & manipulation.

HCP Lab, Sun Yat-sen University

Sep 2019 – Jun 2024

- Advised by Prof. Xiaodan Liang & Prof. Liang Lin
- Worked on vision-language navigation and multimodal understanding.

Xiamen University

Sep 2016 – Jun 2019

- Advised by Prof. Cuihua Li, Prof. Yanyun Qu, and Prof. Yuan Xie
- Worked on computer vision and deep multi-view clustering.

Academic Service

Reviewer for Journal

- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- IEEE Transactions on Multimedia (TMM)
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- IEEE Transactions on Medical Imaging (TMI)
- Neural Networks

Reviewer for Conference

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
- Annual Conference on Neural Information Processing Systems (Neurips)
- Annual Meeting of the Association for Computational Linguistics (ACL)
- Empirical Methods in Natural Language Processing (EMNLP)

Awards

Honors Graduate from Sun Yat-sen University

2024