

Education

School of Computer Science, Harbin Institute of Technology	Guangdong, China
<i>Ph.D. in Electronic Information</i>	2023.09 - 2027.06 (expected)
<ul style="list-style-type: none"> • Advisor: Prof. Liqiang Nie (IAPR Fellow) and Prof. Michael Yu Wang (IEEE/ASME/HKIE Fellow) • Research area: Embodied AI and Vision-Language-Action Model 	
School of Computer Science and Technology, Soochow University	Jiangsu, China
<i>M.S. in Computer Technology</i>	2020.09 - 2023.06
<ul style="list-style-type: none"> • Advisor: Prof. Guohong Fu • Research area: Natural Language Processing 	
School of Computer Science and Technology, Soochow University	Jiangsu, China
<i>B.E. in Software Engineering</i>	2014.09 - 2018.06

Publications

1. **Qi Lv**, Hao Li, Xiang Deng, Rui Shao, Yinchuan Li, Jianye Hao, Longxiang Gao, Michael Yu Wang, Liqiang Nie. Spatial-Temporal Graph Diffusion Policy with Kinematics Modeling for Bimanual Robotic Manipulation. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025.
2. **Qi Lv**, Xiang Deng, Gongwei Chen, Michael Yu Wang, Liqiang Nie. Decision Mamba: A Multi-Grained State Space Model with Self-Evolution Regularization for Offline RL. *The 38th Annual Conference on Neural Information Processing Systems (NeurIPS)*, 2024.
3. **Qi Lv**, Hao Li, Xiang Deng, Rui Shao, Michael Yu Wang, Liqiang Nie. RoboMP²: A Robotic Multimodal Perception-Planning Framework with Multimodal Large Language Models. *International Conference on Machine Learning (ICML)*, 2024.
4. **Qi Lv***, Lei Geng*, Ziqiang Cao, Min Cao, Wenjie Li, Sujian Li, Guohong Fu. Adaptive Sparse Softmax: An Effective and Efficient Softmax Variant. *IEEE Transactions on Audio, Speech and Language Processing*, 33, 3148-3159 (**TASLP**), 2025.
5. **Qi Lv***, Ziqiang Cao*, Lei Geng, Chunhui Ai, Xan Yan, Guohong Fu. General and Domain Adaptive Chinese Spelling Check with Error Consistent Pretraining. *ACM Transactions on Asian and Low-Resource Language Information Processing*, 22(5), 1-18 (**TAL-LIP**), 2022.
6. Hao Li, **Qi Lv**, Rui Shao, Xiang Deng, Yinchuan Li, Jianye Hao, Liqiang Nie. STAR: Learning Diverse Robot Skill Abstractions through Rotation-Augmented Vector. *International Conference on Machine Learning (ICML, Spotlight)*, 2025.
7. Jun Gao, **Qi Lv**, Zili Wang, Tianxiang Wu, Ziqiang Cao, Wenjie Li. UniICL: An Efficient ICL Framework Unifying Compression, Selection, and Generation. *The 63rd Annual Meeting of the Association for Computational Linguistics (ACL)*, 2025.
8. Hengshuo Chu, Xiang Deng, **Qi Lv**, Xiaoyang Chen, Yinchuan Li, Jianye Hao, Liqiang Nie. 3D-AffordanceLLM: Harnessing Large Language Models for Open-Vocabulary Affordance Detection in 3D Worlds. *International Conference on Learning Representations (ICLR)*, 2025.
9. Letian Shi, **Qi Lv**, Xiang Deng, Liqiang Nie. EPD: Long-term Memory Extraction, Context-aware Planning and Multi-iteration Decision. *International Conference on Machine Learning, Multimodal Foundation Model Meets Embodied AI Workshop (ICML Workshop)*, 2024.
10. Siqi Song, **Qi Lv**, Lei Geng, Ziqiang Cao, Guohong Fu. RSpell: A Retrieval-augmented Framework for Domain Adaptive Chinese Spelling Check. *The 12th CCF International Conference on Natural Language Processing and Chinese Computing (NLPCC)*, 2023.
11. InternVLA-A1 Team. InternVLA-A1: Unifying Understanding, Generation and Action for Robotic Manipulation. *Technical Report*.
12. **Qi Lv**, Weijie Kong, Hao Li, Jia Zeng, Zherui Qiu, Delin Qu, Haoming Song, Qizhi Chen, Xiang Deng, Michael Yu Wang, Jiangmiao Pang. F1: A Vision-Language-Action Model Bridging Understanding and Generation to Actions. *In submission*.

13. **Qi Lv**, Daichao Qian, Xiang Deng, Manyuan Zhang, Michael Yu Wang, Liqiang Nie. xxx for Robot Manipulation. *In submission*.
14. Xuening Zhang, **Qi Lv**, Xiang Deng, Miao Zhang, Xingbo Liu, Liqiang Nie. xx: A Dual-Stream xxx for Robotic Manipulation. *In submission*.
15. Mingchen Song, Xiang Deng, Guoqiang Zhong, **Qi Lv**, Jia Wan, Yinchuan Li, Jianye Hao, Weili Guan. Few-Shot Vision-Language Action-Incremental Policy Learning. *In submission*.
16. Haoming Song, Delin Qu, Yuanqi Yao, Qizhi Chen, **Qi Lv**, Yiwen Tang, Modi Shi, Guanghui Ren, Maoqing Yao, Bin Zhao, Dong Wang, Xuelong Li. Hume: Introducing System-2 Thinking in Visual-Language-Action Model. *In submission*.
17. Delin Qu, Haoming Song, Qizhi Chen, Zhaoqing Chen, Xianqiang Gao, Xinyi Ye, **Qi Lv**, Modi Shi, Guanghui Ren, Cheng Ruan, Maoqing Yao, Haoran Yang, Jiacheng Bao, Bin Zhao, Dong Wang. EmbodiedOneVision: Interleaved Vision-Text-Action Pretraining for General Robot Control. *In submission*.
18. Boyang Wang, Haoran Zhang, Shujie Zhang, Jinkun Hao, Mingda Jia, **Qi Lv**, Yucheng Mao, Zhaoyang Lyu, Jia Zeng, Xudong XU, Jiangmiao Pang. RoboVIP: Multi-View Video Generation with Visual Identity Prompting Augments Robot Manipulation. *In submission*.

Experience

National University of Singapore Visiting Student@ShowLab	2025.10 - Present
<ul style="list-style-type: none"> • Explore how to learn dynamics from human videos for VLAs. 	
Shanghai AI Laboratory Research Intern@InternRobotics Group	2024.12 - 2025.09
<ul style="list-style-type: none"> • Develop a tele-operation platform across multi-embodiments, e.g., Franka, Genie-1. • Explore scaling predictive inverse dynamics modeling for robotic manipulation. 	
Huawei Tech Co., Ltd. Research Intern@Noah's Ark Lab	2024.04 - 2024.11
<ul style="list-style-type: none"> • Develop teleoperation platform of universal manipulation interface. • Explore the kinematics for bimanual manipulation tasks. 	
Baidu Tech Inc. Research Intern@MEG Group	2022.04 - 2023.01
<ul style="list-style-type: none"> • Develop engaging content for social media platforms. • Explore the multimodal outline generation of cross-category videos. 	

Awards

• National Scholarship , Ministry of Education of China	2025.10
• Excellent Student Award , Harbin Institute of Technology	2024.12
• Runner-up Award , EgoPlan, ICML Challenge	2024.07
• Bronze medal , Google AI4Code, Kaggle Competition	2022.11
• Silver medal , Feedback Prize, Kaggle Competition	2022.08
• First Prize , Jiangsu Province College AI Algorithm Challenge	2022.01

Academic Services

Reviewers for:	<i>International Conference on Machine Learning (ICML)</i>
	<i>International Conference on Learning Representations (ICLR)</i>
	<i>Neural Information Processing Systems (NeurIPS)</i>
	<i>Conference on Computer Vision and Pattern Recognition (CVPR)</i>
	<i>Association for Computational Linguistics (ACL)</i>
	<i>Empirical Methods in Natural Language Processing (EMNLP)</i>