

Education

School of Computer Science, Harbin Institute of Technology Guangdong, China
Ph.D. in Electronic Information 2023.09 - 2027.03 (*expected*)

- 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
M.S. in Computer Technology 2020.09 - 2023.06

- Advisor: Prof. Guohong Fu
- Research area: Natural Language Processing

School of Computer Science and Technology, Soochow University Jiangsu, China
B.E. in Software Engineering 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 (**TALLIP**), 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 (NLPPCC)*, 2023.
11. **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*.
12. **Qi Lv**, Daichao Qian, Xiang Deng, Manyuan Zhang, Michael Yu Wang, Liqiang Nie. xxx for Robot Manipulation. *In submission*.

13. Xuening Zhang, **Qi Lv**, Xiang Deng, Miao Zhang, Xingbo Liu, Liqiang Nie. xx: A Dual-Stream xxx for Robotic Manipulation. *In submission*.
14. 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*.
15. 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*.
16. 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*.
17. Boyang Wang, Haoran Zhang, Shujie Zhang, Jinkun Hao, Mingda Jia, **Qi Lv**, Yucheng Mao, Zhaoyang Lyu, Jia Zeng, Xudong XU, Jiangmiao Pang. xx: Multi-View Video Generation with xxx Augments Robot Manipulation. *In submission*.

Experience

- National University of Singapore** | Visiting Student@ShowLab 2025.10 - Present
- Explore how to learn dynamics from human videos for VLAs.
- Shanghai AI Laboratory** | Research Intern@InternRobotics Group 2024.12 - 2025.09
- 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
- 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
- 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:** *International Conference on Machine Learning (ICML)*
International Conference on Learning Representations (ICLR)
Neural Information Processing Systems (NeurIPS)
Conference on Computer Vision and Pattern Recognition (CVPR)
Association for Computational Linguistics (ACL)
Empirical Methods in Natural Language Processing (EMNLP)