Kefei Zhu

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Education

Beijing University of Posts and Telecommunications　　*Sep 2021 - Jun 2024*
M.Sc. in Management Science and Engineering (top 3%)

China Jiliang University　　*Sep 2017 - Jun 2021*
B.Eng. in Industrial Engineering (top 3%)

Research Experience

Research Intern, Peking University　　*Sep 2024 - Present*
Advised by Prof. Hao Dong with Robotics Manipulation project.

Research Intern, Institute of Automation, Chinese Academy of Sciences　　*Sep 2023 - Aug 2024*
Advised by Prof. Dongbin Zhao and Prof. Qichao Zhang with Human-like and Safe Autonomous Driving project.

Algorithm Intern, Zeekr Auto　　*May 2023 - Aug 2023*
Developed motion planning algorithms for real-vehicle autonomous driving.

Research Projects

Dexterous Manipulation Data Generation
Project lead and first author　　arXiv ↗　　Project Website ↗　　Heart of the Machine Media ↗

- Leading the development of a scalable and self-improving data generation framework for dexterous manipulation, called DexFlyWheel.
- Published as NeurIPS 2025 Spotlight (3.2% acceptance rate), featured in Heart of the Machine Media.
- Industrial application at PsiBot Company.

Continual RL for Fine-Tuning Pretrained Models in Robotic Manipulation
Project lead and first author, ongoing research

- Leading the development of a novel continual learning framework for robotics manipulation.

Publications

Kefei Zhu, Fengshuo Bai, YuanHao Xiang, Yishuai Cai, Xinglin Chen, Ruochong Li, Xingtao Wang, Hao Dong, Yaodong Yang, Xiaopeng Fan, Yuanpei Chen†, "DexFlyWheel: A Scalable and Self-improving Data Generation Framework for Dexterous Manipulation", **NeurIPS 2025 Spotlight**. arXiv ↗ Project Website ↗ Heart of the Machine Media ↗.

Kefei Zhu, Qichao Zhang†, "StyleFollower: A Two-Stage Car-Following Model for Enhanced Driving Style Diversity and Controllability", **IEEE Transactions on Vehicular Technology**, **Major Revision**.

Pengxuan Yang, Yupeng Zheng, Qichao Zhang†, **Kefei Zhu**, Zebin Xing, Qiao Lin, Yun-Fu Liu, Zhiguo Su, Dongbin Zhao, "UncAD: Towards Safe End-to-end Autonomous Driving via Online Map Uncertainty", **ICRA 2025**, **Accepted**. arXiv ↗.

Xinglin Chen, Yishuai Cai, Minglong Li, Wenjing Yang, **Kefei Zhu**, Fengshuo Bai, Yaodong Yang, Yuanpei Chen†, "ToS: Tree-of-Skill Reinforcement Learning driven by Behavior Tree for Long-horizon Manipulation", **AAAI 2025, in submission**.

Academic Services

Reviewer, IEEE International Conference on Robotics and Automation (ICRA)　　*2025*

Skills

Python, C++, ROS2, Pytorch, Libtorch, Git, OmniGibson

Honors & Awards & Scholarships

BUPT Graduate *First-Class* Scholarship, awarded 3 times (30%)	*2021-2024*
Outstanding Undergraduate Graduates of Zhejiang Province (3%)	*2021*
Zhejiang Provincial Government Scholarship (5%)	*2020*
First Prize in Advanced Mathematics and Calculus Competition	*2020*
CJLU Undergraduate *Second-Class* Scholarship, awarded 3 times (5%); *Third-Class* Scholarship, awarded 2 times (20%); *Research and Innovation* Scholarship	*2017-2021*