Luo Jiayu

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Education

National University of Singapore *Aug 2024 – Present*
MS in Computing (Computer Science Specialisation)
- GPA: 4.67/5.00

Beijing Institute of Technology *Sep 2020 – Jun 2024*
BS in Computer Science and Technology
- GPA: 3.7/4.0

McGill University *Jul 2023 – Aug 2023*
Visiting Student
- GPA: A/A

Publications

TelePreview: A User-Friendly Teleoperation System with Virtual Arm Assistance for Enhanced Effectiveness Jan 2025

Jingxiang Guo*, ***Jiayu Luo****, Zhenyu Wei*, Yiwen Hou, Zhixuan Xu, Xiaoyi Lin, Chongkai Gao, Lin Shao

Submitted to RA-L

Task Allocation: Jingxiang Guo was responsible for completing the hand pose retargeting module. **Jiayu Luo** handled human body retargeting, wrist pose estimation, AprilTag spatial alignment, preview visualization, and experiments. Zhenyu Wei contributed to preview visualization, IO control, and experiments.

D(R, O) Grasp: A Unified Representation of Robot and Object Interaction for Cross-Embodiment Dexterous Grasping Oct 2024

Zhenyu Wei*, Zhixuan Xu*, Jingxiang Guo, Yiwen Hou, Chongkai Gao, Zhehao Cai, ***Jiayu Luo***, Lin Shao

Best Robotics Paper Award @ CoRL 2024 Workshop MAPoDeL

Experience

Research Intern *NUS, Singapore*
LinS Lab (Supervised by Lin Shao) *Aug 2024 – Present*
- Focus on Robotics Manipulation, with an emphasis on imitation learning and teleoperation
- Conduct research on few-shot, multi-task imitation learning

Mechanical Internship *Shenzhen, China*
Research Center, Ubtech *Jul 2022 – Aug 2022*
- Implemented a target tracking algorithm, including kernelized correlation filters, and rigorously assessed code performance by measuring the average Frames Per Second (FPS)
- Enhanced the tracker's functionality to dynamically update specific parameters in real-time, ensuring accurate tracking as the object's scale evolves
- Integrated SiamRPN algorithm to replace the LibTorch dependency with OpenVINO

Projects

Quatitive Manipulation Based on Imitation Learning (Ongoing Research) *NUS, Singapore*
LinS Lab *2025*
- Use demonstrations to teach robots the concept of quantity, enabling them to perform tasks such as pouring a precise amount of water and beans
- Key Words: Imitation Learning, Reinforcement Learning

Campus Food Delivery Robot *Beijing, China*
Beijing Institute of Technology *2022*

- Built a Chinese text recognition model, tailored to efficiently recognize and extract essential information from takeaway receipts
- Empowered robots with autonomous navigation capabilities, enabling them to autonomously execute food delivery tasks
- Key Words: Deep Learning, Computer Vision

Honors & Awards

- Beijing Institute of Technology Outstanding Student Scholarship 2020-2024
- Excellence Award for the 2021 College Student Innovative Entrepreneurial Training Plan Program for the 'Campus Food Delivery Robot'

Skills

Programing: Python, C/C++

Languages: Chinese, English (IELTS: 8.0, GRE: 324)