Yuqi Xiang

☐ +86-158-6160-2727 · ✉ yuqi.xiang@outlook.com · 🏠 yuqixiang.info

No.163 Xianlin Avenue, Nanjing, Jiangsu Province, China (210023)

EDUCATION

Nanjing University   Sept. 2020 – June 2024 (expected)

B.S. in Computer Science and Technology, Kuang Yaming Honors School   *Jiangsu, China*

- **GPA:** 4.70/5.00 (94.0/100)   **Ranking:** 1st/116
- **TOEFL:** 111   **GRE:** V153+Q170+3.5
- **Highlight Courses:** *Operating Systems (97), Artificial Intelligence (96), Problem Solving IV (97, 4-semester course covering Discrete Mathematics, Data Structures, Algorithm Design and Analysis etc.),*
- **Teaching Assistant:** Course of *Problem Solving, Fall 2022*

University of Pennsylvania   Jan. 2023 – May 2023

Exchange student of International Guest Student Program   *Pennsylvania, USA*

- **GPA:** 4.00/4.00
- **Relevant Courses:** *Introduction to Robotics (Graduate-level, A+), Analytical Mechanics (A+), Artificial Intelligence Lab: Data, Systems, and Decisions (A)*

PUBLICATIONS AND MANUSCRIPTS

[1] **Y. Xiang**, F. Chen, Q. Wang, G. Yang, X. Zhang, X. Zhu, X. Liu, Lin Shao "Diff-Transfer: Model-based Robotic Manipulation Skill Transfer via Differentiable Physics Simulation ", *in submission to ICLR*

SELECTED RESEARCH EXPERIENCE

Language-driven and Physics-informed Bimanual Robotic Manipulation   Jul. 2023 – present

Visiting Research student advised by Prof. Masayoshi Tomizuka   *California, USA*

- Proposed a framework via large language models and visual-language models to produce robot trajectories
- Built a dataset(500k+ instances) for language-driven and physics-informed robotic manipulation
- Trained a bridge model to compute affordance map via language and vision features for bimanual manipulation

Diff-Transfer: Robotic Skill Transfer via Differentiable Simulation   Sept. 2022 – June 2023

Research intern advised by Prof. Lin Shao   *(Remote) Singapore*

- Proposed a novel framework leveraging differentiable physics simulation to transfer robotic manipulation skills.
- Introduced a path-planning method leveraging Q-learning with a task-level state and reward to generate a path of sub-tasks where known actions could be adapted from one sub-task to tackle the adjacent sub-task seamlessly.
- Verified the system in simulation with four challenging transfer tasks on robotic manipulation.

Efficient Transformers   June 2022 – Sept. 2022

Research intern, advised by Prof. Yang You   *(Remote) Singapore*

- Implemented efficient large language models including transformers to increase backward speed or reduce memory usage by redesigning the self-attention module.

SELECTED HONORS

1. **National Scholarship** *(top 0.2% nationwide)*   2022
2. **National Elite Program Scholarship** *(special prize, top 5% in elite program students)* 2023, 2022, 2021
3. **People's Scholarship** *(first prize, top 3% in Nanjing University)*   2021
4. **Outstanding Student** *(top 5% in Nanjing University)*   2021

SKILLS

Programming	C/C++, Python, Matlab, Assembly
Tools	Ubuntu, Git, Vim, PyBullet, LaTeX
Robotics	ROS, Robot Kinematics & Dynamics
Machine Learning	SVM, CNN, Transformer, RL Algorithms (Q-Learning, SAC, etc), Meta Learning