

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:** 4.68/5.00 (93.6/100) **Ranking:** 1st/116
- **TOEFL:** 111 **GRE:** V155+Q167+4.0
- **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 Robotic Manipulation

Jul. 2023 – present

Visiting Research student advised by Prof. Masayoshi Tomizuka

California, USA

- Proposed a framework leveraging large language models working with a visual-language model to create 3D value maps from vision and language hints of physics, anchoring the knowledge into the agent's observation space. These value maps are then employed in a model-based planning system to produce robot trajectories.

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** (first prize, top 5% among elite program students) 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