Wanting Yao

wantingyao@zju.edu.cn

EDUCATION

Zhejiang University **Sep. 2021 – *Expected Jun. 2025***

B.S. in Automation, ***Ranking: 10/121*** *GPA: 3.96/4.0(90.97/100)*

PUBLICATION

1. **GCP-Gen: Goal-Conditioned Policy Generation for Robotic Manipulation** CVPR 2025, under review *Pei Zhou*,* ***Wanting Yao****, Yanchao Yang*

WORK EXPERIENCE

Student Research Assistant@HKU-IDS **Sep. 2023 – Nov. 2023**

RESEARCH EXPERIENCE

Goal Conditioned Policy Generation **Jul. 2024 – Nov. 2024**

Research Intern in HKU-IDS, under Prof. Yanchao Yang's Guidance

- Proposed a novel framework using optimization-inspired hypernetwork architecture with a latent space shaping technique to generate goal-conditioned policy for robotic manipulation.
- Trained models based on the above method which reveal the state-of-the-art success rate in simulation and excellent goal-reaching behavior given a single image of the desired goal.

Wheeled Mobile Robot Path Planning and Localization **Mar. 2023 – Jun. 2023**

Enhanced Lab Training Program, under Prof. Yue Wang's Guidance

- Modeled a wheeled robot and implemented its motion control that responds to keyboard input in Gazebo.
- Implemented a SLAM system which uses laser odometry to collect data, applies RRT and DWA algorithms for path planning and the ICP algorithm for localization. Deployed the system on a physical robot car.

PROJECTS

Manipulator Trajectory Planning **Apr. 2024**

- Modeled a six-DoF manipulator with DH parameters and achieved the kinematic and inverse kinematics solutions in MATLAB.
- Used quintic polynomial and linear interpolation solutions for trajectory planning. Implemented the trajectory planning in CoppeliaSim and deployed it on the manipulator.

Magic-Wand-Controlled Drone Flight System **Dec. 2023**

- Collected wand data using an onboard IMU and calculated the position and velocity trajectories of the wand in the world coordinate system.
- Established a system to teleoperate the drone to move in the same way the wand controls it.

Logistic Transport Robot **Sep. 2022**

- Developed a logistic transport robot with recognition, grasping, and placing functions from scratch.
- Adjusted the servo angles using an open-loop tuning method to achieve various mechanical arm postures, enabling gripping and placing at specified positions.

SKILLS

Languages: Python, C, MATLAB, HTML, LaTeX, 8051 Assembly
Develper Tools: VS Code, Git, Keil, Altium Designer, Solidworks, AutoCAD
Technologies: Linux, ROS, Pytorch, 3d Printing, STM32, Arduino

EXTRACURRICULAR ACTIVITIES

Five-Star Volunteer of Zhejiang University (Over 600 hours)
Vice-president of Student Robot Association of Zhejiang University
Leader of Etiquette Team of the College of Control Science and Engineering, Zhejiang University
Member of "Sowing dreams in Ningxia" Summer Volunteer Teaching Organization
Member of Guangzhou Railway Group Shenzhen North Station High-Speed Rail Volunteer Service Team

AWARDS

National Scholarship (Top 3%) issued by Ministry of Education of the People's Republic of China **2024**
First Prize Scholarship (Top 5%) issued by Zhejiang University **2022 & 2024**
Third Prize of the 2023 National College Student Mathematical Contest in Modeling **2023**
Third Prize of the 7th College Student Robot Competition of Zhejiang Province **2023**