Yiyang Shao

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Personal Introduction

I am a junior undergraduate student and have a keen interest in robotics.

I have experience developing navigation and control algorithms for different robots, which has given me a strong understanding of control theory, path planning algorithms, and mastery of techniques like SLAM and ROS.

Currently, I am developing navigation and nonlinear control algorithms based on NMPC and RL for a bipedal robot to enable robust autonomous navigation on uneven terrain.

Educational Background

2021.9–2025.6 **University of Science and Technology of China**

School of Engineering Science · Department of Modern Mechanics

GPA: 3.79/4.30 (4/143)

Selected Course Grades

Mathematical Analysis B1	95
Linear Algebra B1	96
Probability Theory and Mathematical Statistics	92
Mechanics B	100
Thermotics B	100
Theoretical Mechanics B	99
Statistical Thermodynamics	97

Skills, Languages, and Hobbies

Programming	Python, C++, Matlab, Mathematica, etc.
Tools	ROS/ROS2, SSH, Git, Markdown, Latex, etc
Languages	English: Toefl 95 | French: Basic understanding
Hobbies	Soccer , Cycling , Lego

Projects and Major Assignments

(1) I led a team to design a control algorithm that simulates the cat's flipping reflex based on reinforcement learning in a simulation environment in the Shenzhen 01 Academy Summer School 2022.

(2) I am participating in the Robomaster competition, responsible for the control algorithms of the bipedal robot and the SLAM and navigation algorithms for the autonomous sentry robot. Gained more insights into the implementation details during the deployment of SLAM and navigation algorithms to the real vehicle.

(3) I'm Currently leading a project titled "Three-Dimensional Point Cloud-Based Ground Robot Six-Degree-of-Freedom Path Planning and Motion Control".

Awards

JAC NIO Scholarship	Oct 2022
Grand Prize of Zhou Peiyuan Mechanics Competition at Provincial Level	Jun 2023
2nd Prize of RoboMaster 2023 The RoboMaster University Championship	Apr 2023
2nd Prize of RoboMaster 2023 RoboMaster University League	Jun 2023
1st Prize of 2023 Mitsubishi Electrical and Automation Contest Eastern Region	Jun 2023
1st Prize of 2023 SLAMTEC SLAM Autonomous Driving Challenge	Aug 2023
2nd Place of 2023 USTC Artificial Intelligence Innovation Contest	Sep 2023