Zizhe Zhang

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Science · **Philadelphia, PA**
Candidate for MSE in Electrical Engineering, May 2026
- Coursework: Linear Systems Theory, Introduction to Robotics, Applied Machine Learning

University of California, San Diego · **San Diego, CA**
Exchange Student, Jan 2023 - Mar 2023
- Major GPA: 3.85/4
- Coursework: Intro Deep Learning & Apps, Intro to Autonomous Vehicles

Southeast University, School of Instrument Science and Engineering · **Nanjing, China**
BE in Measuring Control Technology & Instruments, June 2024
- GPA: 85.51/100
- Coursework: Signal and Systems, Principles of Automatic Control, Sensor Technology

PUBLICATION

Zhang, Zizhe, et al. "Image-Based Visual Servoing for Enhanced Cooperation of Dual-Arm Manipulation." arXiv preprint arXiv:2410.19432 (2024). **Submitted to RA-L**

PROFESSIONAL EXPERIENCE

Figueroa Robotics Lab, Research Assistant, Philadelphia, PA · Oct 2024 - Present
- Working on ensuring feasibility for passivity-based torque control via learned kinematic constraint mappings
- Seeking a way to generate data in vision-based imitation learning with high quality and efficiency

Robotic Perception and Control Lab, Research Assistant, Nanjing, China · Dec 2023 - Aug 2024
- Designed a shared teleoperation system control based on visual servoing
- Designed a dual-arm collaborative control system based on object simulation and image-based visual servoing

Schneider Electrics, Technical Intern, Shanghai, China · Jun 2023 - Aug 2023
- Engaged in IGBT thermal simulation, capacitor lifetime calculation, EMC test, Kylin project circuit design, etc.

PROJECTS

Subsidence Detection of Mars Rover, *Team of 3* · Jun 2023 - Aug 2023
- Applied edge detection to classify the topography on Mars to avoid or alert soft ground that may lead to subsidence
- Designed a wheeled leg to detect the ground in front of the rover and analyzed the detected force signals to predict the passing ability of the rover

Autonomous Vehicle based on GPS & DoF Camera, *Team of 3* · Jan 2023 - Mar 2023
- Utilized Python and VESC to control the robot, DoF camera to find and track lanes, centimetric GPS and PID method to record and follow paths
- Brought the robot to a complete stop by using PyVesc and DepthAI libraries to run stop sign detection on the camera
- Enabled the robot to respond correctly to speed limit signs by performing text detection on the camera

Analysis of Radiation Source Signals, *Team of 5* · Jul 2021 - Sept 2021
- Used library PYTS to visualize the signals and then built up a CNN to extract the inner features of the ADS-B radio signals and classify the signals, achieving a classification accuracy of over 90

SKILLS

Computer: C/C++, Python, MATLAB, ROS, Linux, Altium Designer, Cadence

Laboratory: Robot System Design, Robot Calibration and Manipulating, Computer Vison, etc.

Languages: Chinese (Native), English (Fluent)