

JINGHAO ZHENG

✉ zjh20030406@sjtu.edu.cn · ☎ (+86) 198-1750-6664

🎓 EDUCATION

Shanghai Jiao Tong University (SJTU), Shanghai, China Sept. 2021 – Jun. 2025(expected)

B.E. in Automation(Computer Science and Engineering), Minor in Finance

- Major GPA:3.81/4.3
- Centesimal grade average:89.12/100

Core Courses: Calculus II(98), Probability and Statistics(99), Linear Algebra(92), Discrete Mathematics(93), Data Structure(90), Principles of Automatic Control(A)(94), Robotics(93), Introductory Pattern Recognition(96)

🧑‍🔬 REASERCH EXPERIENCE

Detect the fairness of the image generation Model based on Diffusion Model by using bias extraction and forgetting *Research Assistant* Feb. 2024 – Present

Advisor: **Xiaolin Huang**, Professor, Vice Dean, Department of Automation, Shanghai Jiao Tong University

Brief introduction: The Diffusion generation bias is extracted and eliminated by concept forgetting algorithm to improve the fairness of the generated model or specify the proportion of the generated concepts.

- Detect the image and extract the face and features in the image by using FairFace and analyze the fairness.
- Given the keywords, detect the fairness of images that generated by stable diffusion model.

Design of distributed collaborative positioning system *Member* Oct. 2023 – Mar.2024

Advisor: **Jianping He**, Associate Professor, Department of Automation, Shanghai Jiao Tong University

Brief introduction: Multiple fixed position cameras are used to determine the specific location of the moving car in the field.

- Implemented control code for motors in the camera head on STM32 board, responsible for controlling the yaw and the pitch of the platform to achieve the accurate angle.
- Completed partial mechanical design of the camera head and design of circuit board.

Design of gas tracing algorithm for dual robots in confined space *Leader* Mar. 2023 – Feb.2024

Advisor: **Liufang Wang**, Senior engineer, Student Innovation Center, Shanghai Jiao Tong University

Brief introduction: The project aimed to trace gas leaks efficiently using robotic systems in constrained environments.

- Developed code for Raspberry PI to control the wheel motors of the robotic car, ensuring precise movement in the confined space.
- Implemented communication protocols between the robotic car and the upper computer with ROS2, facilitating real-time data exchange.
- Wrote the project paper detailing the algorithm design, implementation, and experimental findings.

⚙️ SKILLS

- Programming Languages: Python, C/C++, ROS2, Matlab, Markdown, LaTeX
- Platform: Linux
- Software: Office, SOLIDWORKS, Origin, Ansys, Keil v5, STM32CubeMX, Arduino
- Languages: Chinese(native), English(fluent)

♡ HONORS AND AWARDS

3 rd Prize, TI Cup National Undergraduate Electronic Design Contest Shanghai area	Aug. 2023
3 rd Prize, Academic Scholarship of Shanghai Jiao Tong University	2023
3 rd Prize, Academic Scholarship of Shanghai Jiao Tong University	2022