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 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.

Implementation and comparison of gas tracing algorithms 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

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