

You Yuchen



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whoami-wesleyyou.top



WesleyYou

INTERESTS

I am dedicated to exploring the intersection of *computer security* and *operating systems*, focusing on innovative strategies for securing systems and networks. Interested in contributing to research that addresses global cybersecurity challenges.

EDUCATION

University of Michigan, Michigan, USA

expected graduation: May 2026

Bachelor of Computer Science

Core GPA: 4.0/4.0

Shanghai Jiao Tong University, Shanghai, China

expected graduation: Aug. 2026

Bachelor of Mechanical Engineering

Core GPA 3.84/4.0

RESEARCH

Origami Inspired Soft Robotic Arm

Advisor: Xiaonan Huang (Sean) [\[link\]](#)

University of Michigan

Object: Use the Soft Robot folding and air pump/valve to make a soft arm which can handle complicate tasks in limited area.

Contribution: Lead the computer vision algorithms design for the robotic arm to recognize the objects with limited hashrate embedded system. Lead the stm32 and orangepi board's control algorithm design, including dynamics, PID control as well as can/i2c communication, use C++ and Rust for algorithms and also help with the hardware pcb design. *[Abstract accepted by RoboSoft 2025]*.

LLM-based Robotic Arms Natural Language Task Handling [\[repo\]](#)

Advisor: Yutong Ban [\[link\]](#)

Shanghai Jiao Tong University

Object: Use the LLM and the Flexiv 7 DOF Robot Arm with ZED Depth Camera to handle natural language input and solve daily tasks like solve the jigsaw puzzles.

Contribution: Lead the robotic arm control part, basing on the Flexiv-RDK frame, use the reverse/forward kinematic solution to make fluent control of the 7 DOF manipulator to handle accurate motion.

SELECTED PROJECTS

Auto Sentry Robot Control [\[repo\]](#)

Chinese University National Robot Competition-Robomaster Championship

- **Objectives:** Auto navigation and decision-making sentry robot with double gimbal and 4 dial wheel chassis beating enemy robots base on the STM32F4 board.
- **Contributions:** Lead the circuit design of the auto sentry robot; Lead the control algorithm of the double gimbal and fast-fluent response of the four dial wheel chassis; Lead the design of the CAN/ UART communication with CV process and laser radar; Lead the IMU-based absolute pose control.

CNN-based Medical CT Image Diagnosis and COVID Detect

- **Objectives:** use the dataset of abundant CT images of the covid and non-covid cases to help train models that can recognize the new CT images to decide whether covid.
- **Contribution:** Transform images to tensors and normalize them; Use Unet model to better train my personal model; Save the trained one and evaluate it with the test datasets.

Web Game: Come On Lei [\[repo\]](#) [\[product\]](#)

ENGR 1000J Software Engineering Term Project

- **Objectives:** design a web parkour game which features the ninja style
- **Contributions:** design the mechanics of the game and design all the user interface and fluent animation of the game.

SELECTED HONORS & AWARDS

- 2024 Cheng-Family Scholarship June 2024
- 23rd National College Robot Competition·RMUC Eastern Region Champion May 2024
- 23rd National College Robot Competition·RMUL champion April 2024
- 2023 Shanghai Jiao Tong University scholarship level B December 2023
- 2023 University Physics Competition Silver Medal November 2023
- 2023 Wu Jiong Sun Jie Sunshine Scholarship November 2023
- 22nd National College Robot Competition·RMUC National Champion August 2023
- SJTU Social Practice Third Prize August 2023

EXTRACURRICULAR ACTIVITIES

Yunhan Jiaolong Robot Club, Shanghai *Electric Control Department member, Sept. 2022 - Now*

- Lead the electric control part (coding, circuit designing, controlling, building physical models) of the Auto Sentry robot, which won MVP in the competition many times
- Help organize the “Yunhan Cup” SJTU robot on-campus competition

SKILLS & CERTIFICATIONS

- TOEFL grade 103 / 120 2023/4/28
- Programming Languages: C++, C, Python, Rust, MATLAB, LaTeX, shell, etc.
- Frameworks: PyTorch, FreeRTOS, OpenCV, Flexiv_C++, Django
- Deep Learning: CNN, GAN, RNN, etc

TEACHING EXPERIENCE

Shanghai Jiao Tong University Shanghai, China

- SU. 2024 ENGR1000J (Introduction to Soft Engineering), Teaching Assistant

SELECTED COMMUNITY SERVICE

UM-SJTU Joint Institute Youth Volunteer Team Sept. 2022 – Sept. 2023

- Co-Planner of the Yunan Support teaching activities Shanghai, China

UM-SJTU Joint Institute Business Division Sept. 2022 – Sept. 2023

- Co-author of UM-SJTU JI Student handbook.
- Administrator of the JI Business Piazza Website

Old Friends Youth Team, Shanghai June 2023 – September 2023

- Participate in communication activities between young and elderly friends