

Eason Zhang

yichengz@wustl.edu | F-1 Student | github.com/eaeeaeosn

Second-year Computer Engineering student with 5+ years of competitive robotics experience. Skilled in embedded systems programming, full stack development, rapid prototyping, control theory implementation, and leading cross-functional technical teams.

Education

Washington University in St. Louis

Bachelor of Science in Computer Engineering

GPA:3.98

August 2025 - Present

Expected Graduation: May 2029

Shanghai Pinghe School

International Baccalaureate Diploma

GPA:42/45

September 2022 - May 2025

Experience

Embedded Systems Intern | MindMotion Microelectronics (Shanghai) Co., Ltd.

August 2026

- Validated MindMotion's MM32-based FOC motor development board in Keil, configuring peripherals at the register level directly, and studied the full sensored/sensorless FOC and SVPWM control stack
- Designed a low-cost expansion board around the general-purpose MM32G0005 MCU to bring FOC motor control to the existing dev board, with three-shunt current sensing and overcurrent protection
- Laid out the board in JLCEDA, finalizing a production-ready design

Research Assistant | Jr Shin Li's Lab, Washington University in St. Louis

January 2026 – Present

- Building a multi-robot testbed to validate innovative swarm control algorithms, integrating MoCap localization with a ROS2/micro-ROS communication stack
- Designed custom ESP32 PCBs with integrated pin headers for rapid fleet-scale hardware replication; 3D printed full differential drive chassis bodies and wrote programs for ESP32 listening to micro-ROS communications

UrsaWorks | Washington University in St. Louis | Control Lead

September 2025 – Present

- Sole programmer across three robots (sentry, hero, infantry); achieved club's first full 3v3 lineup and reached the ARCC 2026 1v1 elimination bracket as a top-6 team
- Deployed and tuned an open-source auto-aim pipeline (YOLO + TensorRT) on Jetson Orin Nano — 90 Hz armor-plate detection at 15 ms latency, with camera calibration, PnP pose solving, and EKF tracking
- Sustained ~25% hit rate against targets spinning at 1 rev/s in live matches
- Architected an STM32/FreeRTOS control framework(CAN + UART) shared across all three robots: chassis motion control, cascade-PID gimbal tracking with feedforward, and referee-system protocol integration
- Built the sentry's fully autonomous fixed-route navigation state machine, running with no operator input

STEM Lab Project | Shanghai Pinghe School | Project Founder, Leader

May 2024 – August 2025

- Founded and led 8-student team to build a fabrication lab for a rural high school in Guizhou, China; taught 30 students CAD, 3D printing, and laser cutting
- Mentored a 7-student team through a full rope-climbing robot design cycle; awarded Best Team at Infinite Visionaries Summit

Skills

Programming: C/C++, Java, Python, MATLAB

Embedded: STM32, ESP32, Jetson Orin Nano, PCB design (JLCEDA)

CAD/Fab: SolidWorks, Onshape, 3D printing, Laser cutting

Software: Git, ROS2, Linux, Git

Languages: English (Proficient), Mandarin (Native), Korean (Basic)