Zichun (Jerry) Gao

+1 (443)-518-8605 | g.zichun@wustl.edu | github.com/zichungao88 | St. Louis, MO, USA

EDUCATION

Washington University in St. Louis
McKelvey School of Engineering   **St. Louis, MO**
Bachelors of Science in Computer Engineering & Electrical Engineering   August 2023 ~ present
Minor in Mechanical Engineering
Cumulative GPA: 3.89 / 4.0
4x Dean's List
Expected Graduation: May 2027

Relevant Coursework: Engineering Design, Linear Algebra & Component Analysis, Probability & Statistics, Differential Equations, Electricity & Magnetism, Circuits, Vector Calculus & Dynamics of Physical Systems, Digital Logic & Computer Design, Data Structures & Algorithms, Systems Software, Statics & Mechanics of Materials

SKILLS

- *General-Use Software*: NI Multisim, Multisim Live, Cadence PSpice, Autodesk Inventor, Autodesk Fusion 360, Altium Designer
- *Programming & Markup Languages*: Python, Java, C, C++, MATLAB, LaTeX, R, HTML, XML
- *Hardware Description & Low-Level Languages*: SystemVerilog, Assembly (x86_64, RISC-V, AVR)
- *Software Development*: Ubuntu, ROS 2, Flask, Beautiful Soup, SQLite, Heroku
- *Embedded Systems & Microcontrollers*: Arduino, Raspberry Pi, NVIDIA Jetson
- *Languages*: Mandarin (native & fluent), Spanish (intermediate & conversational)

ENGINEERING EXPERIENCE

Kearfott Corporation Motion Systems Division (MSD)   **Black Mountain, NC**
Electronics Design Engineering Intern   *May 2025 ~ present*
- Develop, implement, & optimize BLDC motor commutation with Hall effect sensors

Future Leaders of McKelvey Engineering (FLOME)   **St. Louis, MO**
Member   *February 2024 ~ present*
- Engage in career development activities e.g. discussion of career goals & sharing of career opportunities
- Bond with fellow members to create meaningful relationships and form a community of aspiring engineers

WashU Robotics Club (WURC) Rover Project Team   **St. Louis, MO**
Software Project Lead   *September 2023 ~ March 2025*
- Developed robot description, control, & localization packages in ROS 2 Humble using Ubuntu 22.04 with several team members
- Utilized existing open-source software e.g. RViz & Gazebo to implement various tasks e.g. teleoperation & autonomous navigation

Robot Control & Navigation Research   **St. Louis, MO**
Undergraduate Research Assistant   *March ~ October 2024*
- Simulated TurtleBot3 by ROBOTIS on Ubuntu 20.04 to test navigation algorithms
- Controlled TurtleBot3 using keyboard teleoperation, arm Python scripts, and gripper GUI
- Utilized ROS Noetic for both virtual simulation and hardware integration

Crime & Social Sentiment Analysis   **Remote**
Researcher & Programmer   *January 2022 ~ February 2023*
- Extracted crime data from the Howard County Police Department website via Beautiful Soup
- Illustrated visual data through charts & graphs
- Displayed on a website via Flask deployed through Heroku for the audience to deduce trends

OTHER EXPERIENCE

Redistricting & Gerrymandering   **Remote**
Researcher   *June ~ November 2021*
- Reorganized & redrew the boundaries of Maryland's 8 congressional districts using Dave's Redistricting App
- Removed old district shapes & created new districts based on roughly equal population, racial, & ethnic distribution

Volunteens (NGO)   **Howard County, MD**
Chief of Technology   *June 2020 ~ June 2023*
- Collaborated with several other officers to serve the needs of the 200+ member organization
- Used WordPress to update website with new volunteer opportunities and service listings