Zichun (Jerry) Gao

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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, Computer Architecture, Data Structures & Algorithms, Systems Software, Statics & Mechanics of Materials, Solid Mechanics

SKILLS

- *General-Use Software*: NI Multisim, PSpice, LTspice, Altium Designer, Autodesk Inventor, Autodesk Fusion 360
- *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
- *Lab Equipments*: Digital Multimeter, Power Supply, Function Generator, Oscilloscope
- *Languages*: Mandarin (native & fluent), Spanish (intermediate & conversational)

PROFESSIONAL EXPERIENCE

McKelvey School of Engineering — Department of Computer Science & Engineering (CSE) — **St. Louis, MO**
Undergraduate Teaching Assistant — *August 2025 ~ present*
- Assist students in CSE 2600: Introduction to Digital Logic & Computer Design
- Hold weekly office hours to provide help on academic assignments & other learning activities

McKelvey School of Engineering — Department of Electrical & Systems Engineering (ESE) — **St. Louis, MO**
Undergraduate Recitation Teaching Assistant — *August 2025 ~ present*
- Assist students in ESE 2300: Introduction to Electrical & Electronic Circuits
- Hold weekly recitation sessions to lead students to work on circuit analysis problems

Kearfott Corporation — Motion Systems Division (MSD) — **Black Mountain, NC**
Electronics Design Engineering Intern — *May ~ August 2025*
- Optimized PCAS BLDC motor commutation with A33230 Hall sensors
- Implemented hardware rework on motor units to accommodate A33230s
- Developed software in C to reflect hardware changes

McKelvey School of Engineering — Undergraduate Research — **St. Louis, MO**
Undergraduate Research Assistant — *March ~ October 2024*
- Simulated ROBOTIS TurtleBot3 via ROS Noetic on Ubuntu 20.04 to test navigation algorithms
- Controlled TurtleBot3 using keyboard teleoperation, arm Python scripts, and gripper GUI

OTHER EXPERIENCE

Future Leaders of McKelvey Engineering (FLOME) — **St. Louis, MO**
Member — *February 2024 ~ May 2025*
- 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

Crime & Social Sentiment Analysis Project — **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

Redistricting & Gerrymandering Research Project — **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