

# Zichun (Jerry) Gao

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## EDUCATION

### Washington University in St. Louis

#### McKelvey School of Engineering

Bachelors of Science in Computer Engineering & Electrical Engineering

Minor in Mechanical Engineering

Cumulative GPA: 3.89 / 4.0

4x Dean's List

Expected Graduation: May 2027

St. Louis, MO

August 2023 ~ present

*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

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## 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
  - *Languages:* Mandarin (native & fluent), Spanish (intermediate & conversational)
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## PROFESSIONAL EXPERIENCE

### McKelvey School of Engineering — Department of Computer Science & Engineering (CSE)

*Undergraduate Teaching Assistant*

St. Louis, MO

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)

*Undergraduate Recitation Teaching Assistant*

St. Louis, MO

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)

*Electronics Design Engineering Intern*

Black Mountain, NC

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

*Undergraduate Research Assistant*

St. Louis, MO

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
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## OTHER EXPERIENCE

### Future Leaders of McKelvey Engineering (FLOME)

*Member*

St. Louis, MO

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

*Software Project Lead*

St. Louis, MO

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

*Researcher & Programmer*

Remote

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

*Researcher*

Remote

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