

# Zichun (Jerry) Gao

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## EDUCATION

### Washington University in St. Louis

#### McKelvey School of Engineering

Cumulative GPA: 3.93

2x Dean's List

Expected Graduation: May 2027

St. Louis, MO

August 2023 ~ present

### University of Maryland

Summer School

College Park, MD

May 2024 ~ present

### River Hill High School

Cumulative Weighted GPA: 4.90

11x Principal's Honor Roll

2x AP Scholar with Distinction

Clarksville, MD

September 2019 ~ May 2023

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## ACADEMIC & RESEARCH EXPERIENCES

### Robot Simulation

Simulation Engineer

- Simulate various robots using Nvidia Isaac Sim Omniverse on Ubuntu to test autonomy algorithms

Washington University in St. Louis

March 2024 ~ present

### Crime & Social Sentiment Analysis

Researcher & Programmer

- 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

Online

January 2022 ~ February 2023

### Data Labeling

Labeler

- Labeled data while guided by two PhD students for an underwater navigation project by running Python with Tkinter
- Manually selected optimal  $x$  &  $y$  coordinates (roll & pitch based on a scale of 1 ~ 7) to simulate an underwater bot

University of Maryland

November ~ December 2022

### Redistricting & Gerrymandering

Researcher

- 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

Online

June ~ November 2021

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## EXTRACURRICULAR ACTIVITIES

### WashU Robotics Club (WURC) Rover Subteam

Software Engineer

- Develop software components e.g. simulation & teleoperation along with six other team members
- Utilize existing open-source packages e.g. Robot Operating System 2 (ROS2), RViz, Gazebo

Washington University in St. Louis

September 2023 ~ present

### Future Leaders of McKelvey Engineering (FLOME)

Member

- Bond with fellow members to create meaningful relationships and form a community of aspiring engineers
- Engage in service-based projects to give back to the local community

Washington University in St. Louis

February 2024 ~ present

### Maryland Technology Honor Society (MTHS)

Member

- Attended monthly dinner meetings featuring guest speakers on various topics of careers in STEM

River Hill High School

October 2021 ~ May 2023

### American Computer Science League (ACSL) Intermediate 5 Division

Teamed Competitive Programmer

- Solved mathematical & algorithmic multiple-choice questions as well as programming problems using Python
- Competed individually on a team of eight for a total team score

Online

September 2021 ~ May 2022

### United States of America Computing Olympiad (USACO) Bronze Division

Individual Competitive Programmer

- Solved mathematical & algorithmic programming problems using Python & C++
- Analyzed each problem, developed & refined an algorithm, & turned the algorithm into code

Online

August 2020 ~ April 2022

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## COMMUNITY SERVICE & ENGAGEMENT

### Volunteers (NGO)

Chief of Technology

- 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

Howard County, MD

June 2020 ~ June 2023

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## SKILLS

- Languages: Mandarin (native & fluent), Spanish (conversational)
- Programming Languages: Python, Java, C++, MATLAB, LaTeX, HTML (novice), CSS (novice), JavaScript (novice)
- Softwares & Packages: ROS, ROS2, Ubuntu, Flutter, Flask, Beautiful Soup, SQLite, Heroku, Tkinter
- Video Editing: iMovie, Final Cut Pro, Handbrake