

Zichun (Jerry) Gao

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EDUCATION

Washington University in St. Louis

McKelvey School of Engineering

Cumulative GPA (4.0 scale): 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 ~ July 2024

River Hill High School

Cumulative Weighted GPA (5.0 scale): 4.90

11x Principal's Honor Roll

2x AP Scholar with Distinction

Clarksville, MD

September 2019 ~ May 2023

ACADEMIC & RESEARCH EXPERIENCES

Robot Control & Navigation

Simulation Engineer

McKelvey School of Engineering

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

Researcher & Programmer

Online

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

Data Labeling

Labeler

University of Maryland

November ~ December 2022

- 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

Redistricting & Gerrymandering

Researcher

Online

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

EXTRACURRICULAR ACTIVITIES

WashU Robotics Club (WURC) Rover Project Team

Software Lead Engineer

McKelvey School of Engineering

September 2023 ~ present

- Develop robot description and control packages in ROS 2 Humble along with several team members
- Utilize existing open-source software e.g. RViz & Gazebo to implement various tasks e.g. teleoperation & autonomous navigation

Future Leaders of McKelvey Engineering (FLOME)

Member

McKelvey School of Engineering

February 2024 ~ present

- 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

Maryland Technology Honor Society (MTHS)

Member

River Hill High School

October 2021 ~ May 2023

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

American Computer Science League (ACSL) Intermediate 5 Division

Teamed Competitive Programmer

Online

September 2021 ~ May 2022

- 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

United States of America Computing Olympiad (USACO) Bronze Division

Individual Competitive Programmer

Online

August 2020 ~ April 2022

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

COMMUNITY SERVICE & ENGAGEMENT

Volunteers (NGO)

Chief of Technology

Howard County, MD

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
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SKILLS

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