Zichun (Jerry) Gao

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EDUCATION

Washington University in St. Louis
McKelvey School of Engineering   **St. Louis, MO**
Cumulative GPA: 3.93   *August 2023 ~ present*
2x Dean's List
Expected Graduation: May 2027

University of Maryland   **College Park, MD**
Summer School   *May 2024 ~ present*

River Hill High School   **Clarksville, MD**
Cumulative Weighted GPA: 4.90   *September 2019 ~ May 2023*
11x Principal's Honor Roll
2x AP Scholar with Distinction

ACADEMIC & RESEARCH EXPERIENCES

Robot Simulation   **Washington University in St. Louis**
Simulation Engineer   *March 2024 ~ present*
- Simulate various robots using Nvidia Isaac Sim Omniverse on Ubuntu to test autonomy algorithms

Crime & Social Sentiment Analysis   **Online**
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

Data Labeling   **University of Maryland**
Labeler   *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 $1 \sim 7$) to simulate an underwater bot

Redistricting & Gerrymandering   **Online**
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

EXTRACURRICULAR ACTIVITIES

WashU Robotics Club (WURC) Rover Subteam   **Washington University in St. Louis**
Deputy Chief Software Engineer   *September 2023 ~ present*
- Develop software components e.g. teleoperation & autonomous navigation along with numerous team members
- Utilize existing open-source packages e.g. Robot Operating System 2 (ROS2), RViz, Gazebo

Future Leaders of McKelvey Engineering (FLOME)   **Washington University in St. Louis**
Member   *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)   **River Hill High School**
Member   *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   **Online**
Teamed Competitive Programmer   *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   **Online**
Individual Competitive Programmer   *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

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

SKILLS

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