Robert Wang

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SKILLS

Programming Languages	Python, Java, JavaScript, HTML, CSS, C/C++, R, SQL, OCaml, x86 Assembly
Software & Technologies	VS Code, React, Express, Flask, Git/GitHub, Azure, Auth0, MongoDB, Docker, Doxygen

EDUCATION

University of Minnesota – *B.S in Computer Science* and *Minor in Mathematics* (GPA: 3.9)   *Expected May 2025*
Relevant Coursework: Software Engineering, Web Development, Data Structures & Algorithms, Program Design, AI/ML

PROJECTS

Personal Portfolio Website | Used: **ReactJS, JSX, CSS, Microsoft Azure**
- Utilized React to develop highly reusable web components, enhancing scalability and maintainability
- Created an intuitive email contact form, facilitating seamless communication between the users and the website
- Designed a fully responsive layout and style to optimize UX on various devices and deployed to Microsoft Azure

SafeRoute | Used: **ReactJS, JSX, Microsoft Azure, MongoDB, CSS**
- Engineered a solution for UMN student safety by providing real-time tracking and crime visualizations on campus
- Leveraged React for an intuitive and responsive SPA and Azure Functions for scalable backend interactions
- Provided accurate location data using the Google Maps API and stored user information using MongoDB.

Microblogging Web App | Used: **ExpressJS, JavaScript, MySQL, Pug, CSS**
- Used the Express framework to manage various server endpoints, ensuring efficient RESTful API interactions
- Maintained an SQL database, leveraging AJAX for seamless data manipulation, enhancing efficiency and control
- Crafted an engaging UI using dynamic Pug templating, and implemented user accounts to provide a more secure and individualized user experience

Community Housing App | Used: **Flask, Python, JavaScript, PostgreSQL, HTML, CSS**
- Worked on a project team to build a housing application for users to easily join groups and manage tasks
- Utilized the Flask framework to manage server endpoints and APIs, ensuring a smooth and bug-free experience
- Integrated Auth0 for secure user account management and log-in, and organized website and user information using a PostgreSQL database

Drone Pickup Service | Used: **C++, HTML, JavaScript, Doxygen, Docker, VS Code**
- Simulated a drone pickup service inside a 3D front-end map of the UMN campus with a trip planning UI
- Built within VS Code using C++ and integrates various AI routing algorithms and design patterns
- Enhanced the front-end UI and back-end design to include features like data collection and energy consumption

Election Voting Processor | Used: **Java, Javadoc, IntelliJ**
- Developed a Java application to parse election data using custom objects and outputs the winner and audit file
- Engineered to accept multiple CSV files containing election information in IR, CPL, and popularity-based elections
- Collaborated with a team to draft detailed product specification documents and executed using Agile Scrum

WORK & EXTRACURRICULARS

Tech Academy STEM Instructor	Worked as an instructor for Tech Academy MN, to organize classes and educate students of various ages STEM topics such as robotics, engineering, and programming.	*(May 2023 – August 2023)*
Muon-to-Electron (Mu2e) engineer	Contributed to the assembly of an electron detector for the Mu2e experiment, a national physics initiative exploring novel physics, and engaged in the recording and analysis of experiment data using PyQt	*(January 2022 – March 2023)*
Science Olympiad	Played a pivotal role in leading my Science Olympiad team to a top-3 regional finish, contributing to the development of diverse mechanical and digital projects	*(November 2017 – May 2021)*