Robert Wang

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SKILLS

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

EDUCATION

University of Minnesota – *B.S in Computer Science* *and* ***Minor in Mathematics*** **(GPA: 3.95)** *Expected May 2025*
Relevant Coursework: Software Engineering, Web Development, Data Structures & Algorithms, Program Design, AI/ML

WORK EXPERIENCE

Software Engineer Intern | Danfoss | May – August 2024 **|** Used: **Qt, QML, JavaScript, C/C++, Azure DevOps**

- Developed a full-stack interface and control system application for Danfoss autonomous vehicles
- Specified detailed software requirements and crafted a scalable and organized user interface using Qt/QML/JS
- Designed and rigorously tested a complex back-end architecture and implemented efficient algorithms with C/C++
- Collaborated and implemented solutions with a diverse, global team using Agile development methodologies

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

EXTRACURRICULARS

Tech Academy STEM Instructor (May – August 2023), **Muon-to-Electron (Mu2e) engineer** (January 2022 – March 2023), **Science Olympiad** (November 2017 – May 2021), **Varsity Tennis** (April 2020 – May 2021), **Robotics** (January – March 2017)