Robert Wang

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SKILLS

Programming Languages	Python, Java, JavaScript, HTML, CSS, C/C++, SQL, OCaml, x86 Assembly
Software & Technologies	Visual Studio Code, React, Express, Git/GitHub, Pug, Docker, Doxygen, Azure, Flask

EDUCATION

B.S. in Computer Science at the **University of Minnesota Twin Cities – GPA: 3.9** *Expected May 2025*
Relevant Coursework: Data Structures and Algorithms, Program Design, Software Engineering, Statistics, AI/ML

PROJECTS

Personal Portfolio Website
Personal project | Used: **React, HTML, CSS, JavaScript, Microsoft Azure**

- Implemented 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

Microblogging Website
Coursework: Internet Programming | Used: **Express, Pug, JavaScript, SQL, CSS**

- Utilized the Express framework to manage various server endpoints, ensuring efficient RESTful API interactions
- Maintained a 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

Drone Pickup Service
Coursework: Program Design & Development | 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
Coursework: Software Engineering | 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

Random Word Generator
Personal project | Used: **Java, IntelliJ**

- Created a program capable of processing and analyzing large amounts of word data from the English language
- Generates a list of words of specified lengths that adhere to the morphological patterns of English words
- Implemented a custom prefix tree data structure and various algorithms to optimize the processing efficiency

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	Participated in constructing electron detector parts in the UMN Mu2e experiment, a national physics project searching for unknown physics.	*(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)*