

# Robert Wang

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## SKILLS

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**Languages** | Python, Java, HTML, CSS, C/C++, JavaScript, SQL, OCaml, x86 Assembly  
**Software & Tools** | Visual Studio Code, IntelliJ, ReactJS, GitHub, Git, Docker, Doxygen, Azure, Flask, 3D Modeling

## EDUCATION

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**Computer Science Student** at the **University of Minnesota Twin Cities (yr. 3) – GPA: 3.9**

*Relevant Coursework:* Data Structures and Algorithms, Program Design, Software Engineering, Statistics, AI/ML

## PROJECTS

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### Personal Portfolio Website

Personal project | Used: ReactJS, HTML, CSS, JavaScript, Microsoft Azure

- Implemented the React library to create easily reusable components in the website
- Created an email contact form, which allows for quick and easy communication with a user on the website
- Designed the fully responsive layout and style of the website myself and deployed to Microsoft Azure

### Task List with User Login

Personal project | Used: HTML, CSS, Python, Flask, JavaScript

- Implemented the Flask framework to handle both aspects of the front-end and back-end with Python
- Used the database class of the Flask framework to handle various user account data, allowing for each user to store their own specific and private information
- Added a security check during login and sign-up using Flask database, insuring secure accounts

### Drone Pickup System

Coursework: Program Design & Development | Used: C++, HTML, JavaScript, Doxygen, Docker, VS Code

- Created an uber style drone pickup service with a 3d frontend map of the UMN campus, with a trip planning UI
- Built inside VS Code using C++ and implements different AI routing algorithms and design patterns
- Extended front end UI and backend for more features like data collection and energy consumption

### Election Voting Processor

Coursework: Software Engineering | Used: Java, Javadoc, IntelliJ

- Created a program to store election data in custom Java objects and outputs the winner and resulting audit file
- Allows users to input multiple CSV files containing election information in IR, CPL, and popularity only elections
- Collaborated with a team to write detailed product specification documents and executed using Agile Scrum

### Random Word Generator

Personal project | Used: Java, IntelliJ

- Created a program that takes in large amounts of word data from the English, or any English-like language, and returns a list of generated words that completely follow the phonetic patterns of such language
- Implemented custom Java classes to create objects and data structures to perform the task efficiently

## WORK & EXTRACURRICULARS

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<b>Muon-to-Electron (Mu2e) engineer</b>	Worked to build electron detector parts in the UMN Mu2e experiment, a national physics project searching for unknown physics.	(January 2022 – March 2023)
<b>Tech Academy STEM Instructor</b>	Worked as an instructor for Tech Academy MN to organize classes and teach students of various ages STEM topics such as robotics, engineering, and programming.	(May 2023 – August 2023)
<b>Science Olympiad</b>	Helped lead my high school SciO build team to the top 3 in the region, participating in the creation of various mechanical and digital projects.	(November 2017 – May 2021)