

Julie Wu

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Project Experience

Probloom, AI-driven Web App

Nov-Dec 2023

Frontend Developer | Next.js, HTML, CSS, Typescript, Bootstrap

- Contributed to a collaborative team of four in developing Probloom, an AI-driven web app generating tailored practice problems from user inputs in plain text or PDF formats, with solutions for effective answer verification. Generated questions and/or solutions can be downloaded as a PDF.
- Led the design and development of the web app's About and Team Page, leveraging HTML, CSS, Next.js, and TypeScript, integrating a Bootstrap carousel for intuitive creator navigation.
- Addressed bug issues, such as clearing the content of PDF attachments upon user restarts.
- Implemented **Scrum Agile** methodology for streamlined project communication, ensuring regular feedback and adaptability
- Utilized **Figma** collaboratively to create comprehensive data flow diagrams and wireframes/prototypes, enhancing visualization and communication within the team

Maze Robot

July-Aug 2023

Embedded Systems Developer | C programming language

- Collaborated within a 3-member team to design and construct a robot capable of navigating through a maze, learning the maze during runtime using sensors, and returning to the starting point using the shortest path
- Led the development of code using RobotC, a language akin to C, involving activities such as pair programming, testing speed and rotation values, storing maze cells for testing, and crafting a custom pathfinding algorithm.
- Implemented a robust motion control system, leveraging gear ratios to enhance encoder resolution, and fine-tuned the motor control algorithms for smooth maze traversal

Barcode Recognition

May-June 2023

Computer Vision Software Developer | C programming language, MatLab

- Directed the implementation of a barcode recognition algorithm using MATLAB in a team of 3, incorporating techniques such as moving average and finite difference to accurately determine corresponding letters.
- Successfully presented a functional barcode-reading LEGO robot, achieving a high evaluation score of 9.8/10 for the project, and gaining valuable insights into the integration of programming and hardware in a real-world application.

Individual Projects

Superhero Tracker

Nov 2023 - Present

Java Full Stack Developer | Java, JavaFX, Spring, Postman

- Developed a user-friendly superhero tracking app with JavaFX, allowing users to easily add, display, delete superheroes by ID, and search for specific superheroes, all using JSON data storage
- Managed server-side operations using **Spring**, implementing **REST APIs** to facilitate efficient interaction with the application's data stored in the 'superhuman.json' file. Ensured robust error handling and response codes for seamless functionality.
- Proficiently tested and refined application functionality using **Postman**, validating seamless communication between JavaFX and Spring. Adhered to coding style guides for optimal design principles

Yelp Database App

Nov 2023 - Present

Backend Developer | Java, SQL, JDBC

- Developed a Java-based application modeled after Yelp, enabling user-friendly interactions for tasks like user authentication, searching for businesses and users, establishing social connections, and leaving business reviews
- Utilized Java and **JDBC** to establish a secure and efficient connection with the SFU **SQL** database, showcasing adeptness in SQL for seamless data retrieval and modification

MyWebsite: A Harmonious Blend of Music and Code

Nov 2023

Personal Project | HTML, CSS, Javascript, Github Pages

- Merging my passion for music and frontend development, my personal website is a captivating blend of artistic expressions and technical skills
- Utilized HTML, CSS, and JavaScript to craft an engaging user experience, featuring dedicated sections for my musical journey, coding projects, and a comprehensive 'About Me.' Boxicons enhance aesthetic appeal and user navigation
- Leveraged **GitHub Pages** for seamless hosting, ensuring universal accessibility and providing a platform for sharing my performances, web development services, and contact information

Order and Chaos Game Development

May-April 2023

Introduction to Computer Programming II, SFU

- Designed and implemented a complete "Order and Chaos" game using C++, featuring a flexible (6x6 to 9x9) grid-based board and player-versus-computer gameplay
- Implemented user-friendly input handling, allowing players to make moves using coordinates (e.g., 2B) and choose between X or O pieces, enhancing the overall gaming experience

- Designed and integrated a random-move AI algorithm, strategically placing X or O pieces in empty cells

Technical Skills

Languages: Java, C/C++, SQL, HTML, CSS, JavaScript, Typescript, React, Python

Applications: Visual Studio Code, Xcode, IntelliJ Idea, Github, Matlab, Git, Postman

Volunteer Experience

Software Systems Student Society (SSSS) 2nd Year Representative

June 2023 - Present

Student Outreach Coordinator | SFU

- Coordinated inclusive events targeting women and non-binary individuals in computer science, ensuring success and participant comfort, while actively engaging in marketing efforts.
- Organized events like Hangout Day, Picnic Day, and the bi-weekly Pancake Event, cultivating an inclusive atmosphere and facilitating networking opportunities among students. These initiatives encouraged social interaction and community building, fostering a sense of belonging within the university.

Education

Simon Fraser University

Jan 2023 - Present

Major in Computer Science - focus on Software Systems

- CGPA: 3.9

Honours and Awards

Piano

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| • UBC music scholarship of \$5000 | April 2021 |
| • Bronze Award Winner in the Pacific Rim International Music Competition | March 2019 |
| • 2nd Place Winner in the Canadian Music Competition National Finals | June 2016 |
| • Gold Medalist Winner in the Chinese Golden Bell Music Competition | June 2016 |