Julie Wu

Vancouver, BC

Technical Skills

Languages (including markup)
- C++
- Java
- Javascript
- HTML/CSS

Applications
- Git

Operating Systems
- Mac OS X

Transferable Skills

- Excellent written and verbal communication skills
- Ability to work under pressure and in time sensitive situations
- Preseverance through years of being in the classical music industry
- Good teamwork skills

Project Experience

Maze Robot   **July-Aug 2023**
Mechatronics Design, SFU
- 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.
- Implemented a robust motion control system, leveraging gear ratios to enhance encoder resolution, and fine-tuned the motor control algorithms for smooth maze traversal.

Sumo Robot   **June-July 2023**
Mechatronics Design, SFU
- Led the development of an autonomous LEGO Sumo robot aimed at dominating Sumo contests through strategic maneuvering and opponent displacement.
- Designed advanced movement algorithms that enabled the robot to adeptly respond to varying ring conditions, maintain in-ring positioning upon white line detection, and strategically execute alternating left-right rotations for effective adversary detection.
- Led the team to a remarkable 3rd-place victory among 15 other contestants

Barcode Recognition   **May-June 2023**
Mechatronics Design, SFU
- Devised and implemented a barcode recognition algorithm using MATLAB, 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 score of 9.8/10 for the project, and gaining valuable insights into the integration of programming and hardware in a real-world application.

Order and Chaos Game Development   **May-April 2023**
CMPT135, 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 robust player input handling, enabling users to input moves in the form of coordinates (e.g., 2B) and piece choice (X or O).
- Designed and integrated a random-move AI algorithm that selected empty cells and placed X or O pieces strategically.
- Ensured a user-friendly experience by providing clear instructions, handling user input validation, and offering the option to concede or quit the game.

Employment

Piano Teacher   **Feb 2013 - Present**
Self-employed
- Taught piano and music theory to students
- Created customized lesson plans for students ranging from all ages
- Accompanied students during competitions and RCM exams

Volunteer Experience

2nd-Year Representative of the Software Systems Student Society   **June 2023 - Present**
(SSSS)
SFU
- Girlies Noon: Assisted with marketing and event coordination of this event that's targeted towards women and non-binary individuals in computer science. Ensured the event's success and participants' comfort.
- Pancakes Event: Actively volunteered in bi-weekly pancake events by helping with the preparation, cooking, and distribution of food to students.
- Hangout Day: Volunteered by serving pizza and welcoming new students, helping them feel comfortable as they enjoyed board games, video games, and other activities in a casual and friendly atmosphere.
- Picnic Day: Currently organizing an event where new students entering university can socialize, play some outdoor games, have some snacks, and listen to stories from the upper year Computer Science students.

Pianist   **Oct 2017 - Mar 2020**
Westminster House Retirement Community
- Offered monthly 1-hour long piano performances to senior residents

Education

Simon Fraser University   **Jan 2023 - Present**
Major in Computer Science - focus on Software Systems
- GPA: 4.0

Honours and Awards

Piano
- 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**

Interests:

- Swimming
- Tennis
- Composing

- Dancing
- Writing
- Food enjoyer