

Justin Xue

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Education

Bachelor of Science, Computer Science.

McGill University – Montreal, QC.

Expected Graduation: May 2026

Experience

Blackberry QNX – Ottawa, ON.

May 2024 - Aug 2024

Software Developer

- Developed tests in **C** for the QNX OS, enhancing libC function coverage while providing portability across multiple versions.
- Implemented **Python** automation scripts to interact with Jama Software, streamlining the development process and reducing manual processing time by 50%.

Hack the 6ix – Remote.

Sept 2023 - Present

Design Executive

- Worked collaboratively on UI/UX design, guided by usability tests, to develop the Hack the 6ix 2024 website (**Figma**)

FIRST Robotics – Ottawa, ON.

Sept 2022 – Jun 2023

Member of Software Team

- Implemented vision detection for Apriltags and reflective tape using homography-based pose estimation (**OpenCV**).
- Collaborated with over **20** software students using a feature branch Git workflow to deliver a competitive robot.

Logiscool – Ottawa ON.

Sept 2021 – Jun 2023

Coding Instructor

- Prepared over **30** lessons in introductory programming and **advanced Python** courses to students online and in person
- Monitored students' learning progress and provided constructive feedback on their development.

Projects

AI Music Analysis Web App – [Devpost](#)

- Developed "Melodica," an AI web app for track separation and song analysis at Canada's largest AI hackathon (**MAIS Hacks**).
- Leveraged ML technology to analyze the waveform of a user-inputted song (**Moises.ai**, **Basic Pitch**) and implemented an interactable user-interface to visualize frequency, pitch, and chord progression (**HTML**, **CSS**, **Flask**, **p5.js**, **Three.js**).
- Resulted in a **2x award-winning** project, securing the **People's Choice** and **Best Hack for All Arts** awards.

Restaurant Service LLM App – [Devpost](#)

- Created a virtual host to streamline restaurant services with the **Cohere API** at Canada's largest hackathon (**Hack the North**).
- Implemented a front-end web app (**HTML**, **CSS**, **JavaScript**) to accommodate text-to-speech and speech-to-text (**Web Speech API**) functionality and allow users to verbally engage with our custom LLM model.
- Utilized an Arduino ultrasonic sensor to allow users to interact with the virtual host in real-time (**Flask**, **Socket.io**).

Website Blocker Extension – [GitHub](#)

- Developed a Chrome extension designed to enhance productivity and promote focus by blocking distracting websites.
- Implemented customizable blocklists, scheduling options, and designed the overall layout (**HTML**, **CSS**, **JavaScript**).

2D Roguelike Unity Game – [Itch.io](#)

- Led a team of 4, delegated tasks, and assumed the role as primary presenter. Resulted in the team winning **first place**.
- Implemented game mechanics, collision detection, visual effects, audio, and menu UI (**Unity C#**, **FL Studio**, **Photoshop**).

Economy Discord Bot

- Designed core features: economy system, rewards, interactive games, and responsive texts.
- Implemented CRUD operations to responsively update user profile economies (**Node**, **Discord.js**, **Heroku**, **MongoDB**)

Programming Languages

Python, Java, JavaScript, C#, C, HTML, CSS.

Other

MongoDB, Express, React, Node, Flask, Git, Unity, Figma, Unix, Selenium.