Gordon Zhou

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EDUCATION

University of British Columbia

Vancouver, BC

Bachelor of Science, Combined Major in Computer Science and Mathematics

Sep. 2023 - Ex. May 2027

- Relevant Coursework: Systematic Program Design (99%), Models of Computation (100%), Algorithms and Data Structures
- Cumulative Average: 94.1%

Vancouver Technical Secondary

Vancouver, BC

Sep. 2018 - May 2023

Projects

MoodPlay | React, TensorFlow, Vercel, Spotify API

January 2023 – Present

- Engineered a full-stack web application using React as the Front-End and Vercel serving a REST API with as the Back-End
- Using TensorFlow, trained a custom AI emotion detection model and drowsiness detection model to change the user's music based on their facial expression as input
- Implemented Spotify Embed API for the in-app music player and Spotify OAuth to allow users to log in via their Spotify credentials and customize their playlists

Melon Discord Bot | Python, MongoDB

November 2020 – January 2022

- Developed a Discord Bot for a Discord server to increase server engagement and strengthen community
- Integrated MongoDB to store user data and server metrics for bot functionalities such as image handling, voice channel metrics and birthday tracking
- Deployed Discord Bot on Heroku for robust 24/7 command access
- Collaborated with server moderators to suggest features and get feedback about the bot

MelonBoy | Rust, SDL2

January 2024 - March 2024

- Engineered a Gameboy (DMG) / Gameboy Color (CGB) emulator from scratch using a compilation of original hardware documentation
- Supports cycle-accurate execution of various DMG and CGB ROMS including Pokemon Crystal, Zelda Link's Awakening, and Shantae
- Integrated automated testing of major DMG and CGB test suites including Blargg's Tests, cgb-acid2, dmg-acid2, and majority of Mooneye's Test Suite
- Integrated SDL2 for emulating audio playback, display rendering and user input

Relevant Experience

Teaching Assistant – CPSC 121: Models of Computation

 $September\ 2024-Present$

University of British Columbia

Vancouver, BC

- Assisted in teaching over 500 students in an introductory computer science course. Led lab sections for 90+ students, providing hands-on instruction in circuit design and simulation.
- Provided tailored support for students and adapted teaching strategies to accommodate diverse learning styles.
- Contributed to course improvements by collaborating with professors and fellow TAs, attending weekly meetings to discuss teaching strategies and enhance the student learning experience.

VT Coding Club President

September 2021 – September 2023

Vancouver Technical Secondary

Vancouver, BC

- Organized weekly club meets and events for our club's 50+ current members and 70+ member Discord Server
- Collaborated with a team of programmers and designers to develop the club website's front-end using HTML/CSS and JavaScript
- Hosted and organized educational workshops for various topics in CS, including Web Development, Competitive Programming and Game Design

TECHNICAL SKILLS

Languages/Libraries JavaScript, Typescript, React, Rust, C++, Python, HTML/CSS, TensorFlow, Java, Racket, R Tools/Frameworks Git, VSCode, Firebase, MongoDB, Flask, FastAPI, IntelliJ, Visual Studio, Pycharm