Gordon Zhou

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EDUCATION

University of British Columbia Vancouver, BC
Bachelor of Science, Intended Combined Major in Mathematics and Computer Science *Expected Spring 2027*
- 99% in CPSC 110 2023W1, placing in the top 22 of students
- 100% in CPSC 121 2023W1

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
- Passes all major DMG and CGB test suites including Blargg's Tests, cgb-acid2, dmg-acid2, and most of Mooneye's Test Suite; implemented automated tests to ensure robustness
- Integrated SDL2 for emulating audio playback, display rendering and user input

Spotify Playlist to Youtube | *Spotify API, Youtube API, Python* March 2022
- Wrote a python script that automatically converts any Spotify playlist to a YouTube Playlist
- Uses the Spotify API to fetch the data of all songs in a Spotify playlist and queries each song using the Youtube API

CLUB EXPERIENCE

VT Coding Club September 2021 – September 2023
President *Vancouver, BC*
- 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
- Organized weekly club meets and events for our club's 50+ current members and 70+ member Discord Server
- Lead a team of club executives by hosting bi-weekly progress meetings and delegating various tasks

TECHNICAL SKILLS

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