

Haihan Chen

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EDUCATION

McGill University

Bachelor of Software Engineering

Sept. 2018 – Dec. 2021 (expected)

Conservatoire de musique de Montréal

Bachelor in Piano Performance

Sept. 2018 – Jun. 2021 (expected)

Diploma of College Studies, Music

Sept. 2016 – Jun. 2018

Marianopolis College

Diploma of College Studies, Arts and Sciences

Sept. 2016 – May. 2018

Awarded Daniel Goldman Gratitude Bursary, Dean's List, Honours Roll

WORK EXPERIENCE

Convolution Interactive Studios, Programmer and Web Developer

Jan 2020 - ongoing

Montreal, QC

- Developer currently working on "The Lonely Walk Home", a story-based adventure game in **Unity**
- Responsible for writing character interaction animation scripts and unity performance tests in **C#**

SOFTWARE PROJECTS

MyCampus

Jan. 2020 – ongoing.

- Developing a social media platform with **Django** for McGill students for creating and joining events
- Android team lead, application in **Kotlin** using **Retrofit** as **REST** client
- Fixed memory leaks and performance issues using tools such as Android Profiler and ADB

Olympia Bowl Hawkesbury Website

Dec. 2019 – Jan. 2020

- Created a commercial website for displaying opening hours and booking lanes
- Used **Django** framework for the backend, **SQLite** database, and **ReactJS** with **Redux** for the frontend

Online Tutoring System

Sept. 2019 – Dec. 2019

- Developed a tutoring system deployed to **Heroku** with **Spring boot** as the backend **REST API**
- Implemented a **Vue.js** frontend with **jQuery** and an **Android** app in **Kotlin**
- Implemented a denormalized database copy for 15% faster reads on average for transactions

PARKME.

Sept. 2019 – Jan. 2020

- Developed an **Android** application in **Kotlin** which provides street paid parking spot availabilities
- Improved marker clustering speed by around 50% by using a local **SQLite** database and timers in async tasks
- Partnership with Stationnement Montréal, runner-up for MOVE prize

SKILLS & INTERESTS

Programming Languages: Java, Python, C/C++, ARM Assembly, JavaScript.

Frameworks: Spring Boot, Django, ReactJS, Vue.js

Version Control/OS/Databases/Unix shell: Git, Linux, PostgreSQL, MongoDB, Bash scripting

Languages: French (Native), English (Native), Mandarin (Proficient)

Awards: 2020 Google Tech Challenge Winner, Cansbridge Fellowship Delegate Scholarship

Certifications: First Class Honours in Grade 10 Piano RCM, National Lifeguard

EXTRACURRICULARS

MINDSTORMS Robotics Project, Project Co-manager and Software Lead

Sept. 2019 – Dec. 2019

Montreal, QC

- Wrote a **Java** program for robot localization, navigation, and ballistic launching and reloading mechanism
- Multithreading** and concurrency optimization; less than 1% of test runs with memory issues
- Used a **D* lite** pathfinding algorithm for terrain navigation, 55% less vertex expansions compared to A*
- Implemented a **PID controller** for obstacle avoidance for a 60% decrease in Euclidean error compared to P
- Testing, calibration, and thread debugging using analysis from data logging
- Weekly sprint meetings and code reviews, task assignments with Kanban boards, and gantt charts

Various Hackathons

Sept. 2018 – ongoing.

Tech Games, McHacks, GameJam, MeteoHack, Social AI, PrideHacks, ImplementAI, etc.

- Developed a slack-bot in **Python** for emergency categorization with **LUIS** and **QnAMaker**
- Developed an article management **Node** project using **TypeScript** and **ExpressJS** framework
- Implemented a **KNN** machine learning algorithm with 89% accuracy for music genre preferences predictions
- Developed an air-quality monitoring app in **Swift** using NAPS API