RU CHEN

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Education

Bachelor of Software Engineering (Co-Op)   Sep 2024 – Apr 2028 (expected)
McGill University, Montreal, QC
- Relevant course work: Foundations of Programming, Fundamentals of Software Development, Discrete Structures, Communication in Engineering, Probability & Statistics for Engineering
- CGPA: 3.8

DEC: Pure and Applied Science   Aug 2022 – May 2024
Marianopolis College, Montreal, QC
- Dean's list   Fall 2022 – Winter 2024
- Marianopolis Scholar   Winter 2024

Skills

Programming languages: Python, Java, JavaScript, GameMaker Language, HTML, CSS, C++
Developer tools: Git, Github, VS code, IntelliJ, GameMaker, Blender, MERN stack
Languages: English – Full Professional, French – Full Professional, Mandarin – Native, Cantonese – Native

Projects

GM Platform – *Individual platformer game –* (*Personal project*)   May 2025
- Wrote the game logic using **Gamemaker language** (player movement, collision mechanics)
- Designed in-game levels and drew all sprites using **Aseprite**, a software for pixel art design.

TeaChat – *Real-Time Chat Application* (*Personal project*)   Jun 2025
- Built full-stack messaging application using **React** and **Node.js** with real-time messaging, cloud-based image sharing, responsive and easy-to-use texting UI, enabling instant communication between multiple users.
- Developed secure backend infrastructure with **Express** APIs, **JWT** authentication, **MongoDB** database, and **Socket.io** WebSocket connections for real-time data synchronization.
- Deployed production-ready application on Render.com with optimized build processes.

StockMounts – *Stock Prediction Application* (*Personal project*)   Jun - Jul 2025
- Built full-stack stock predictor with **React**, featuring interactive stock charts and secure user authentication (including GitHub OAuth), allowing users to manage private stock notes.
- Implemented RESTful APIs with **Express** and **MongoDB** for robust data and user management.
- Trained machine learning-based stock prediction models using **scikit-learn** and served them through **Python**-based **FastAPI** microservices, with **Redis** used for backend rate limiting.
- Containerized the multi-service architecture with **Docker** and deployed at https://stockmounts.onrender.com.

FitBuddy – *AI-powered Fitness Trainer Application* (*Personal project*)   Jul 2025
- Built voice-interactive fitness platform using **Next.js**, **React** and **Typescript** that bridges **Vapi.ai** voice agent with Gemini AI to generate personalized workout and diet plans for users.
- Implemented robust user authentication with **Clerk**, real-time data synchronization with **Convex** database, **webhook**-based triggers to sync user events. Designed responsive UI with **Tailwind CSS** to immediately deliver customized and safely stored personal fitness programs.
- Deployed production-ready application on Vercel.com: https://fitbuddy-ai.vercel.app

Extracurricular activities

McGill Chinese Students and Scholars Association (CSSA)   Sep 2024 – Current
McGill University, Montreal, QC
- Assist the IT department in developing CSSA's official website using **Vue.js**, a frontend web framework.
- Design graphics and text layout of CSSA's promotion posts using Canva.