Ethan Wang

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EDUCATION

University of Guelph | **Guelph, ON**

B.C. in Computer Science (CO-OP) | **Dean's List** | **Minor in Business**   **September 2021 - April 2026**

Relevant Courses: Data Structures, Algorithms, Object-Oriented Programming, System Design, Statistics, Databases, UI/UX

TECHNICAL SKILLS

Programming Languages: Python, C/C++, C#, Java, JavaScript/TypeScript, HTML/CSS, SQL, R, PHP
Frameworks/Libraries: React/React Native, Node.js, AJAX, JQuery, Flask, Material UI, Bootstrap
Development Tools: Git, Linux, Docker, Vercel, MySQL, SQLite, Unity, phpMyAdmin

PROFESSIONAL EXPERIENCE

Database Developer | **University of Guelph** | **Guelph, ON**   **June 2024 - August 2024**

- Designed and implemented a robust database using MySQL, Apache, PHP, and phpMyAdmin, integrating it with C# and Unity game engine. Achieved 1ms database query times while ensuring the security of sensitive medical information.
- Engineered and interfaced C++ onboard code with a React Native app for BLE (Bluetooth Low Energy) medical monitoring devices, achieving a latency of just under 5ms for real-time data communication.
- Collaborated on the development of a user-friendly graphical interface, ensuring a smooth and intuitive experience for users interacting with the VMT system.

IT Technician | **City of Guelph** | **Guelph, ON**   **September 2023 - December 2023**

- Interacted with a diverse user base on a daily basis, showcasing strong communication skills to effectively comprehend and resolve their IT concerns.
- Resolved AutoCAD licensing-related issues impacting city employees by utilizing scripting in Python to create a download script for installing proper license verification tools.

PROJECTS

ComBo Event Board | **React, Node.js, JavaScript, Python**   **March 2024**

- Worked with a group to develop a community board website that allows users to create, post and register for events.
- Created a visually appealing front end using React, JavaScript as well as frontend frameworks such as Material-UI.
- Integrated JavaScript functionalities to add interactive elements and dynamic content, enhancing user engagement and interaction, thereby contributing to a clear user interface (UI) and a positive user experience (UX).
- Interfaced with Flask backend to retrieve and update an SQL database, allowing for real-time updates as well as the creation, storing and displaying of events saved in the database in under 10ms.

Maze Generator Website | **Python, JavaScript, AJAX, HTML, CSS**   **January 2024**

- Developed a maze generator web app using Python and Flask; Optimized algorithm to generate complex mazes in under 0.5 seconds, enhancing user engagement and experience.
- Full visualization of user's choice of algorithms pathfinding process and discovered shortest path; Generated under 1 second.

Molecule Visualization App | **C, Python, SQL, JQuery, AJAX**   **April 2023**

- Developed a full stack application that parses chemical compounds from molecular data using C and Python and stored in an SQL database.
- Rendered portable 3-D visualization of complex molecules using the SVG format.
- Designed a responsive web client using JQuery and AJAX.