Matthew Au-Yeung

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SKILLS

Languages: C#, Kotlin, Python, C/C++, JavaScript, TypeScript, HTML/CSS, Java, SQL, Bash, Git
Tools/Frameworks: ASP.NET Core, React, React Native, Node.js, JQuery, Flask, FastAPI, Nginx, Docker
Databases/Cloud: PostgreSQL, Microsoft SQL Server, MongoDB, CosmosDB, AWS, Azure, Dynamics365

EDUCATION

University of Waterloo   Waterloo, ON
Candidate for Bachelors of Computer Science, Honours Co-op (3A)   *Sept. 2022 – Apr. 2027*
- **3.66 Overall GPA** (84%) / **3.85 Major GPA** (87.83%)
- Courses: Data Structures & Algorithms, Object-Oriented Programming, Intro to Compilers, Statistics

EXPERIENCE

Software Developer   May 2024 – Aug. 2024
Township of Centre Wellington - Source Water Protection   *Fergus, ON*
- Developed features for an internal app used by **28 municipalities** to track and protect source water using *C# ASP.NET Core MVC, JQuery, Typescript, MSSQL*
- Redesigned app security and built an admin portal to dynamically create and manage permissions for **300+ users**
- Implemented a live **collaborative text editor**, supporting custom embeds with **20+ layouts and reports** using *SignalR Websockets and Quill.js*
- Streamlined CI/CD with Typescript transpilation via *Webpack*, and automated testing with *Playwright* and *xUnit*

Research Assistant   May 2024 – Present
University of Waterloo   *Waterloo, ON*
- Developed using *Kotlin* a MIPS Assembly **runtime environment** used annually by over **1,000 students** for the CS241 course
- Integrated a text-based user interface debugger with **Lanterna**, featuring a paneled layout that supports **stepping**, **breakpoints**, and data visualizations

Data Science & Administrative Assistant   May 2023 – Aug. 2023
Bio-Ag Consultants and Distributors   *Wellesley, ON*
- Implemented custom APIs to streamline access to company metrics, sales, and inventory from *Dynamics365*. This initiative resulted in significant time savings, equivalent to **3+ hours** per day
- Analyzed inventory datasets of over **10,000** items to uncover **$30,000** in losses due to manufacturing errors

Sales Associate   May 2021 – Present
McPhail's Cycle & Sports Ltd.   *Waterloo, ON*
- Actively cater to customers with questions and concerns, and purchases from a selection of **300+** different bicycles, parts, and hockey equipment

PROJECTS

Course Connect | *React Native, Fast API, Websockets, PostgreSQL, Auth0*   May 2024
- Developed a mobile app enabling users to anonymously connect classmates and share course-specific content
- Integrated live chatting functionality using **Websockets**, managing the encrypted content within a PostgreSQL database
- Built a robust FastAPI backend, rendering authorization through Auth0 JWT tokens

Chess | *C++, Next.js, Flask, AWS*   Nov. 2023
- Developed a fully-featured chess game in **C++**, incorporating multiple design patterns and MVC to achieve high efficiency and a framework for enhancement
- Implemented an intuitive React-based user interface, accessing the compiled game through a Flask API endpoint