

Eric Liu

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Education

University of Waterloo

Candidate For Bachelors of Computer Science

Waterloo, Canada

Sep. 2021 - Apr. 2026

Courses: Data Structures and Algorithms (C++), Database Management (SQL), Operating Systems (C), OOP (C++), Compilers (C)

Technical Skills

Languages: JavaScript/TypeScript, C/C++, Python, Kotlin, HTML, CSS, SQL, C#, Java, Bash

Frameworks: React, Express.js, Node.js, Spring Boot, Angular, Playwright, Pandas, NumPy

Tools: OpenShift, Kubernetes, Docker, Jenkins, PostgreSQL, MySQL, Cloud SQL, AWS, Git

Work Experience

Canadian Imperial Bank of Commerce

May. 2024 – Present

Software Engineer | Kubernetes, Docker, Jenkins, JavaScript, Java

Toronto, Canada

- Spearheaded the development of new user interfaces for the **industrial fraud management application** utilizing **React**
- Engineered **CI/CD pipelines** using **Jenkins** to containerize and deploy **12 core business APIs** to **OpenShift**, supporting both integration testing and production environments, resulting in a **52% reduction in post-deployment issues**
- **Reduced** Aqua Scan vulnerabilities by **95%** through implementing fixes and **migrating JDK versions**, ensuring **compliance with corporate security standards** and **significantly enhancing overall system security**
- **Conducted extensive code reviews** during UI development for the industrial fraud management application, reducing product errors by **20%** and ensuring robust, user-friendly interfaces

SynMatrix Technologies Inc

Jan. 2023 – Apr. 2023

Software Engineer | React, Express.js, JavaScript, Playwright

Richmond Hill, Canada

- Designed a JSON-driven, **object-oriented** CLI application for web automation, validation, and testing of enterprise software utilizing JavaScript, Playwright, and **TDD**, ultimately expediting the SDLC
- Leveraged **modularization**, **page-object model**, **polymorphism**, and the **factory method** to improve program encapsulation, scalability, abstraction, and efficiency by **64%**
- Developed a single-page application with **React** and **Express.js**, enabling users to upload, edit, execute and visualize input JSON files for the CLI application, enhancing user interaction and accessibility
- The CLI application served as a **prototype to drive the AI-based technical support platform** and was **recognized by various development teams** for its innovation and utility

GrantMatch

May. 2022 – Aug. 2022

Data Engineer | Python, SQL, Pandas, NumPy, AWS

Oakville, Canada

- **Led the design and implementation** of intuitive user interfaces for a data catalog web application utilizing Python Dash and Bootstrap, leading to **30% increased user engagement** and a more efficient data discovery process
- Utilized **HTTP Requests**, **BeautifulSoup**, and **Selenium** to program **automated scripts** that perform user login and extract desired information from **over 10** online database platforms with **4000+ data entries**
- Implemented **ETL pipelines** to transform **semi-structured and unstructured data** and implemented **AWS Lambda Triggers** to map **549** scraped funding programs into the intermediate PostgreSQL database

Projects

UWConnect 🔗

Kotlin, Cloud SQL, Retrofit, Jetpack Compose, Ktor

- Led a team of four developers to create an Android application that serves as a central hub for resources and information, enhancing connectivity and collaboration at the University of Waterloo
- Designed **controllers** and **middleware** following **MVVM** architecture and utilized **coroutines** and **concurrency** to seamlessly integrate the client and server while **improving user experience**
- Implemented **JWT authentication** for secure user sign-in, action authorization, and **auto re-authentication** on app relaunch
- Developed **REST API endpoints** to support advanced application features using **Cloud SQL** and **Ktor**

MealForU 🔗

React, Express.js, PostgreSQL, Axios, Tailwind CSS

- Developed a dietary application utilizing the Edamam API, in which users can input the preferred nutrient composition to obtain recipes that provide ingredients, detailed instructions, and recipe image
- Performed **server-side input verification** and conducted API calls to extract recipes from all pages in **linear time**