

BRIANNA WANG

SOFTWARE ENGINEERING @ University of Waterloo

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SKILLS

LANGUAGES: Java, Python, C/C++, JavaScript, Typescript, Scala, HTML/CSS, SQL

TOOLS, FRAMEWORKS: AWS (Lambda, DynamoDB, S3), React, Vue, Node.js, SpringBoot, PostgreSQL, Docker, Git, GCP, Terraform, Jenkins CI/CD, New Relic, Sumo Logic, DataDog

WORK EXPERIENCE

Genesys, Fullstack Developer – *Markham, ON*

Jan 2023 – April 2023

- Architected new **AWS Lambda** functions and API endpoints in **Python** for several serverless web applications, facilitating the cloud-based distribution and management of customer eLearning and training resources
- Refactored the learning service by optimizing backend logic, **DynamoDB** transactions, and **S3** uploads, and implementing a thread-local cache for HTTP request data, improving lambda execution time by **30%**
- Built UI features in **Vue** and **TypeScript** and reworked Axios HTTP services for web apps serving **300,000+** users
- Enhanced monitoring infrastructure with **Terraform** to streamline the creation of **30+** New Relic alerts for SQS/DLQ
- Wrote **180+** E2E and unit tests in Python, and automated tests in **Java**, discovering and fixing several unnoticed defects

OMERS, Backend Developer – *Toronto, ON*

May 2022 – Aug 2022

- Implemented new endpoints to batch upload, validate, and search pension member data in **Java** with **PostgreSQL**, supporting a new **SpringBoot** microservice to handle an expected **50,000** new users
- Designed an internal employee chat application in SpringBoot, hosted on **GCP**, implementing **REST API** endpoints to manage chats/users and request authorization with Azure AD to build a shareholder-approved MVP
- Proposed and developed a custom user authentication system with Spring Security using basic auth and **OAuth2**, securing key microservices processing the data of **500,000+** members
- Wrote **100+** unit and integration tests using the **JUnit** framework to fulfill >80% code coverage for 4 applications

PROJECTS

2D Platformer Game ↗

Feb 2023 – Present

- Creating a 2D platformer in Unity using **C#** with procedurally generated maps

Scala Language Subset Compiler

Sept 2022 – Dec 2022

- Built a compiler for a subset of the Scala language, supporting type checking, procedures, closures, garbage collection
- Implemented scanning, parsing, context-sensitive analysis, stack/heap memory to generate MIPS machine language

Custom Spotify Web App ↗

Jul 2022 – Oct 2022

- Built a single-page web application with **React** in **Javascript** to stream and control music from a web player using the Spotify API, and show detailed track data in a user-friendly manner, deployed on Heroku
- Implemented login functionalities to authenticate users with OAuth2, handling requests in an **Express.js** server
- Created a music player in the browser using the Spotify SDK, to customize streaming features and controls, select and play songs from playlists, and gather and analyze track metadata to more intuitively present to the user

COVID-19 Screening Device ↗

Oct 2021 – Jan 2022

- Created an automated face mask detector, temperature sensor, and room capacity tracker on a Raspberry Pi in **Python**
- Implemented face mask screening and processing components using OpenCV and **TensorFlow** models to analyze a live video feed from an attached camera, with a real-time notification system for screening results

EDUCATION

Bachelor of Software Engineering, University of Waterloo

Sept 2021 – Present

- **Cumulative GPA: 93.09** – 2x Term Dean's Honour List

AWARDS AND HONOURS

- Governor General's Medal: Graduated with the top high school average of 100%
- International Baccalaureate Diploma: Scored a full 45/45, in the top 98th percentile of graduates