

EDUCATION

University of Waterloo

Bachelors in Computer Science, Co-op – Fourth Year

September 2019 - Present

Cumulative GPA: 87%

SKILLS

Languages: C++, Java, TypeScript/JavaScript, Python, C, SQL, Scheme, R, HTML/CSS
Technologies: Spring, Node.js, PostgreSQL, MongoDB, Kubernetes, Kafka, Grafana, Docker, Git

WORK EXPERIENCE

Software Engineer | Mercari

January 2023 – Present

Software Engineer | Autonomic

September 2022 – December 2022

- Designed and implemented microservices for vehicle command processing in Java Spring capable of handling over 1,500 Kafka records per second to meet throughput targets.
- Improved command state consistency logic across multiple Kafka streams applications and PostgreSQL databases, eliminating over 48,000 commands stuck in non-terminal states.
- Created features and endpoints for the launch of a new custom command initiative to reduce developer time by allowing customers to bootstrap their own command definitions.
- Pushed deployments to production on Kubernetes through Concourse and Argo CD while monitoring metrics through Grafana and testing using JUnit and Mockito.

Undergraduate Research Assistant | University of Waterloo

May 2022 – August 2022

Computational Motion Group – Professor Christopher Batty

- Developed a fluid simulation framework in C++ implementing the incompressible Navier-Stokes equations and utilizing finite differences on a 2-D marker-and-cell grid.

Software Engineer (Platform Team) | Infor

January 2022 – April 2022

- Conducted an overhaul of the Workforce Management Spring application's logging framework from Log4j to Logback to address security concerns and decouple configuration from code.
- Revised database access logic to eliminate compatibility systems for the legacy Db2 z/OS database, improving Flyway database migration speeds by up to 50%.
- Proposed infrastructure changes with architects to minimize impact of changes on client environments and created new build pipelines with upgrade guidelines.

Full Stack Software Engineer | Honeybee Hub

May 2021 – August 2021

- Led the implementation of a subscription-based pricing model across a Node.js, Express, React, and MongoDB application while using Stripe to securely handle payment processes.
- Created a new Next.js application for a prescreening survey system including survey and response navigation pages and support for dynamic branching logic.

PROJECTS

FlowerID | Mobile app that identifies flowers species

tonylizj.com/flower

- Android app build with React Native and TensorFlow.js that uses a camera image and a custom trained convolutional neural network to identify flower species with over 80% accuracy.

highlighter | Better code syntax highlighting in Discord

tonylizj.com/hl

- Node.js and Express REST API that syntax highlights code of over 30 languages and a Discord bot that allows users to highlight their code in chat within seconds.