

Valerie Fernandes

✉ valerie.fernandes@uwaterloo.ca  [linkedin.com/in/valerie-fernandes16](https://www.linkedin.com/in/valerie-fernandes16)  github.com/ValerieFernandes

EDUCATION

University of Waterloo, Waterloo, ON

(September 2021 - April 2026)

- **Bachelor's of Software Engineering** - Cumulative GPA: 87.21%
- **Relevant Coursework:** Data Structures and Algorithms, Software Engineering Principles (C++), Intro to Combinatorics, Digital Computers

SKILLS

Languages - Python, C#, SQL, Java, JavaScript, C, C++

Tools - Spring Boot, Kubernetes, Git, Firebase, .NET, NumPy, Matplotlib, Docker, Postman,

EXPERIENCES

Solace - Software Developer

(January - April 2023)

- **Architected MVC infra** for API management microservice, adopted by company development teams
- Utilized cloud infrastructure to **develop 12 REST API endpoints** using the Spring Boot framework
- **Improved efficiency by 35%** optimizing Liquibase scripts to define Elasticsearch schema for EventAPI
- Engineered AsyncApi generation library and integrated its usage across 7 microservices, allowing **customers to simplify management** of their Event Driven Architecture

Toronto Transit Commision - Software Developer

(May - August 2022)

- Developed a .NET vehicle monitoring and correction application **deployed on 2000+ TTC vehicles**
- Architected OOP model in C# to replicate daily bus logs, reducing runtime from **8 hours to 40 mins**
- Designed SQL schemas and deployed **ETL pipelines** to populate databases and query 100k+ rows for reports assisting managers in making departmental decisions

Midnight Sun (Solar Car Design Team) - Strategy Team

(January 2021 - January 2022)

- Performed regression analysis and visualized car data with **Python**, using **Pandas**, and **Matplotlib**
- Employed **NumPy** to create optimization function returning suggested solar car speeds which allow for the most energy efficient race

Women In Computer Science - Director of Publicity

(April 2023 - Present)

- Created promotions for WICS events and opportunities, facilitating connection and sharing opportunities within a **network of 1600+ women and non-binary students**
- Organized bi-weekly events to facilitate mentoring and empower women establishing tech careers

PROJECTS

Time Turner

- Created a system for automated task-scheduling, integrated metrics from camera connected to a **Raspberry Pi** using a **Python** algorithm that employed **OpenCV** to quantify facial drowsiness
- Built a dashboard using React and **Material UI**, employed **Firebase** for storing and transmitting data

EnviroPact

- Developed a **React** application with individualized recommendations for eco-friendly volunteer events
- Leveraged **IntegratedML** to apply prediction model estimating impact score of volunteer experience

French Language Learner

- Developed a **Java** application, for teachers to manage progress for classes of student learners
- Implemented a parse tree to algorithmically generate phrases for learning exercises, based on individual competency in a variety of metrics
- Employed **java.net** package enabling socket connection to transmit data via multithreaded server