

# Nathan Louie

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## EDUCATION

### University of Waterloo – *Bachelor of Computer Science*

2022 – 2027

Courses: Object Oriented Software Development (C++), Algorithm Design (C / Bash / Make) GPA: 91.6% (4.0 / 4.0)

Faculty of Mathematics National Scholarship Recipient (1 of 10) – \$15,000

## TECHNICAL SKILLS

**Languages:** C/C++, Python, Elixir, Java, Rust, R, SQL, Flutter/Dart, JavaScript/TypeScript, HTML/CSS

**Tools/Libraries:** Bash, Linux, Docker, PostgreSQL, Phoenix Liveview, Svelte, React, Firebase, MongoDB

## EXPERIENCE

### BlackBerry – *Software Engineering Intern*

Jan – Apr 2024

- Improved and maintained BlackBerry's intelligent in-vehicle data platform (IVY) CLI in **Python** and **C++** to enhance the user experience and feature capabilities for **1000+** vehicle developers to use
- Implemented and automated various end-to-end tests for company-wide use to help verify backward compatibility between IVY SDK release versions using **Bash** and **Python**
- Extended the functionality of current sensor frameworks and prototyped **3+** new features in **C++** to help developers create more complex vehicle applications

### TD Innovation Lab – *Software Engineering Intern*

May – Aug 2023

- Improved and maintained an accessibility Chrome extension in **TypeScript** that **90,000+** TD Bank employees use to enhance their browsing experience (**TD Accessibility Adapter**)
- Prototyped an app to address social issues, prove viable marketing tactics to attract new customers, and validate technical feasibility using **Flutter** and **Firebase Functions**
- Created a proof-of-concept colour correction extension in **Python** by implementing colour space linear algebra transformations to help people with colour vision deficiencies view images on websites better

### The Bike Brigade – *Software Engineering Intern*

bikebrigade/dispatch | Jun – Aug 2022

- Contributed to a **non-profit's open source project** that coordinates 1700+ volunteers to dispatch goods and serve thousands of Torontonians and non-profit organisations
- Implemented **10+ new features** making it more user-friendly for volunteers to sign up and make deliveries
- Improved the login experience by adding a username and password authentication system with **PostgreSQL**
- Refined the user interface and layout of the application by collaborating with designers to ensure an intuitive user experience using **Phoenix Liveview** and **Elixir**

## PROJECTS

### Youtomp3 – *Python, Svelte, Rust*

/youtomp3

- Implemented a Python desktop app to download videos from Youtube and Spotify as MP3 files
- Working on a distributable version 2.0 using a Svelte front-end, Rust back-end, and Spotify/Youtube APIs

### GoFisch (Winner of TOHacks 2021) – *Javascript, React*

/gofisch

- Developed a website to help people easily start a game of Chess960 using the Lichess API
- Created a user-friendly interface with an animated chessboard and custom FEN string creation algorithm

### Instrument Signout System – *Vaadin, MongoDB, Java*

/miss

- Built a full stack web application using Java that facilitates musical instrument management with a MongoDB database and frontend using Vaadin

## AWARDS

Lieutenant Governor's Community Volunteer Award (2022), SHAD - University of Calgary (2021), Duke of Edinburgh Bronze Award (2020), Black Belt in Shorin-Ryu Karate (2019)