

Nelson Loop

226-238-0068 | nloop@uwaterloo.ca | github.com/NelsonL2903 | linkedin.com/in/NelsonLoop

SKILLS

Languages: JavaScript, TypeScript, C++, C, C#, HTML/CSS, Python, Java, Ruby

Technologies: React, Next.js, Angular, Ruby on Rails, Material-UI, ROS, AWS, Docker, Redis, Unity, Git

EXPERIENCE

OnOrder

Jan 2024 – Apr 2024

Software Engineering Intern | TypeScript, Next.js, HTML/CSS, Material-UI, Redis, Puppeteer

Toronto, ON

- Integrated OpenAI and HuggingFace APIs to standardize user data and implemented Redis caching to optimize data retrieval, resulting in reduced API calls by 98% and a faster data normalization process by 85%.
- Leveraged TypeScript, Material-UI and integrated responsive web design principles to seamlessly translate Figma designs into a Next.js application, ensuring optimal functionality across all screen sizes and enhancing overall user experience.
- Employed Puppeteer to systematically extract product details from diverse websites for over 10,000 products, facilitating comprehensive data collection.

Swap Robotics

May 2023 – Aug 2023

Web Developer | JavaScript, HTML/CSS, AWS, Docker, PostgreSQL, Material-UI, Jest

Kitchener, ON

- Used JavaScript, HTML, CSS, and Material-UI to implement 15+ user-requested features to a Dockerized React application, including monitoring critical robot systems and implementing fail-safe protocols to prevent autonomous operations in case of system failures.
- Integrated Google Maps APIs to simultaneously track and visualize the real time locations of 20+ robots.
- Developed REST APIs to interact with AWS S3 Buckets as well as PostgreSQL db through the Prisma ORM.

Swap Robotics

Sept 2022 – Dec 2022

Autonomous Robotics Software Developer | Python, ROS, Foxglove

Kitchener, ON

- Utilized Python, ROS, and Foxglove to develop code for real-time data tracking, reporting, and visualization of autonomous robots.
- Retrieved and monitored real-time safety diagnostics of a motor MCU from a CAN bus in Python, to enhance safety measures in robot operations.

Tuq Inc.

Jan 2022 – Apr 2022

Software Developer | Ruby, Ruby on Rails, Angular, TypeScript, HTML

Waterloo, ON

- Designed and developed applications based on client specifications, employing Ruby on Rails and Sorbet for backend development, in conjunction with Angular, TypeScript, and HTML for frontend implementation.
- Developed REST APIs that interact with Active Record models, implemented unit tests, and documented with Swagger API for applications, enhancing application reliability and company software quality.
- Met with clients to discuss specifications for applications, and designed Entity-Relationship Diagrams based on those specifications, ensuring alignment with client needs and project success.

PROJECTS

Portfolio Website | *TypeScript, NextJS, HTML/CSS, Material-UI, Vercel*

- Developed a professional portfolio website showcasing my previous work experiences, skills and projects.
- Utilized NextJS, TypeScript, HTML, CSS and the Material-UI library, and hosted on Vercel.

2D Grid-Based Strategy Game | *Unity, C#*

- Learned Unity and C# to create a 2D grid-based strategy game.
- Utilized Jira for tickets and organization during development.

EDUCATION

University of Waterloo

Sept 2021 – Present

BASc. Computer Engineering, Honours, Co-operative Program

Waterloo, ON

- Third year undergraduate student.
- Expected Graduation April 2026.