

PATRICK MALONEY

SUMMARY OF QUALIFICATIONS

- **Languages:** JavaScript, C++, Python, SQL, MongoDB, Java, HTML, CSS, C#, C, MATLAB
- **Technologies:** React.js, MySQL, Express, Node.js, Django, Linux, QNX, Vue.js, Unity, VS Code, Docker, gtest, gmock, Git, SonarQube

EXPERIENCE

Full Stack Software Developer

IBM May 2021 - Aug. 2021

- Developed a SIEM web app using a variety of technologies including **React.js**, **Sass**, **Node.js**, **Docker**, **SQLite**, and **NoSQL DBs**
- Wrote Restful APIs in **Node.js** for new and legacy web applications while applying web development engineering best practices
- Designed and developed a data-heavy visualization report to allow clients to view exported SIEM rules offline using vanilla **HTML** and **CSS**

Power Management Software Developer

Ford Motor Company of Canada

Jan. 2020 - April 2020

- Produced large-scale, thread-safe and performance-oriented software using **C++** to manage data from Controller Area Networks (**CAN**) across three Electronic Control Units (ECUs)
- Used **VS Code** and **Momentics** to develop cross-platform code to run on **Linux** and **QNX** embedded systems
- Delivered debugging tool which enabled CAN messaging, resource state querying, and power states requests during testing

Sept. 2020 - Dec. 2020

- As the person second-most experienced with the code base, I brought forward major design decisions and implemented critical new features while increasing code stability and maintainability
- Completely redesigned the team's API to allow for request status callbacks and a simplified use case based requesting interface
- Expanded unit test coverage by 25% using **gtest** and **gmock** frameworks in first two weeks

Software Developer

Big River Technologies Inc. May 2019 - Aug. 2019

- Designed and built a **MySQL** database to improve tracking of employee provisioning and access management
- Used **React** to implement new client features and defect fixes
- Developed coding best practice and company standards documentation

Cancer Radiotherapy Research Assistant

Grand River Regional Cancer Centre Sept. 2019 - Mar. 2020

- Worked with doctors and professors in a study to analyze retrospective radiation therapy data for the optimization of brain cancer treatment
- Developed **Python** scripts to extract and visualize treatment plan data from radiation modelling system

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PROJECTS

Watopoly, Android App

SW Design & Archt. Term Project Jan. - April 2020

- Built University of Waterloo-themed version of the classic Monopoly board game for the Android phone using advanced software design strategies

Augmented Reality Android App

Best VR/AR Hack, BrickHack 5 Feb. 2019

- Developed a facial recognition and information display app for the Vuzix Blade smart glasses in under 24 hours with the use of **Unity**, **Vysor**, and **Vuforia**

ML Spotify Playlist Generator

Hack the North Project Jan. 2021

- Built a **React** web app with a **Django** backend that generates a tailored Spotify playlist based on the user's saved songs and inputted keywords

Note-Taking Web App

Personal Project Dec. 2020

- Used **React**, **Express**, **Node.js**, and **MongoDB** to create a dynamic web app for tracking notes, reminders, and to-do items

EDUCATION

BASc. in Biomedical Engineering, Computing Option (3B term)

University of Waterloo 2018 - exp. 2023
Dean's Honours List 89% Avg, 3.82 CGPA
Ranked **8/75** in Program

Relevant Courses:

- Software Design and Architecture
- Data Structures and Algorithms (**C++**)
- Digital Computation (**C#**)
- Image Processing

ACTIVITIES/INTERESTS

- University orientation organizer/leader
- Competing in hackathons
- Engineering Society Council
- Hockey, Skiing, Volleyball, Ultimate Frisbee
- Grew up working and living on a beef farm