

# Mohammed Shahwan

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## Education

### Memorial University of Newfoundland

BACHELOR IN COMPUTER ENGINEERING

- Mathematics Minor Completed.

St. John's Newfoundland

Sep 2018 – Apr 2023

## Work Experience

### Nasdaq Verafin

SOFTWARE DEVELOPER

- Worked closely with designers and engineers to migrate a large-scale web application from a legacy **JavaScript** framework to **React**, ensuring smooth UI transitions and modern design patterns.
- Developed and shipped frontend features with a focus on performance, usability, and modern UI patterns, ensuring a seamless user experience.
- Optimized backend performance by analyzing slow API endpoints and improving **SQL** queries, **Java** logic, and frontend interactions to enhance responsiveness.

St. John's, NL

May 2023 – Present

### Nasdaq Verafin

SOFTWARE DEVELOPER STUDENT

- Implemented and shipped frontend changes for Data Validation feature in a large-scale web application.
- Worked closely with backend engineers to integrate data validation logic and ensure seamless visualization of validation results.

St. John's, NL

Sept 2022 – Dec 2022

### Engage Creative Technologies

JUNIOR SOFTWARE DEVELOPER

- Developed a full-featured e-commerce application using **Vue.js** and Stripe, leveraging **Firestore** cloud functions for a scalable, serverless backend.
- Collaborated in an Agile team of five developers, utilizing Git for version control to build and maintain diverse web applications with WordPress, npm, **TypeScript**, Vue.js, Node.js, and Firestore.
- Designed and implemented a web scraper to extract marine vessel data, integrating the collected information into a mixed-reality application using **Python**, BeautifulSoup, and TypeScript.

St. John's, NL

Jan 2022 – May 2022

### Memorial University Faculty of Engineering

CO-OP ENGINEERING STUDENT

- Developed and tested software-defined radio (**SDR**) applications for the HackRF One and RTL-SDR using **Python** and **GNU Radio**.
- Conducted compatibility testing of two software systems with WERA Radar, identifying performance gaps and optimization opportunities.
- Integrated HackRF One with the WERA Radar site in Argentina, NL, enabling real-time data verification and analysis.

St. John's, NL

May 2021 – Aug 2021

### Matrox Digital Systems Limited

SOFTWARE DEVELOPER

- Developed clean, reusable, and well-tested code using **C++** and **C#**
- Constructed algorithms to test image processing functionalities and ensure their precision.
- Assisted a team in designing and developing new features for MIL.
- Integrated tests for new features added in Matrox Imaging Library(MIL).
- Acquired knowledge of machine vision and tools used for Image processing.

Montréal, QC

Jan 2020 – Apr 2020

## Projects

### Killick-1 CubeSat

C++, Python, Flask, GNURadio, SDR,  
Grafana, Git, GitLab

**KILLICK-1** Worked as part of the Communications (Ground Station) Subteam on Killick-1, Newfoundland and Labrador's first Earth observation CubeSat. Developed and optimized radio communication systems for data transmission, designed processing protocols for satellite telemetry, and built real-time dashboards for mission monitoring. Built Grafana dashboards for real-time data visualization, enabling better satellite performance monitoring.

## Skills

**Languages** React, TypeScript, JavaScript, Java, Python, Vue, HTML, CSS, Latex  
**Applications** VScode, Cursor, JetBrains, Docker, Jenkins, Git, Jira  
**Databases** Postgres, Firebase, MySQL, MongoDB