

+ employment

BMO Capital Markets
Software Engineering Intern

Toronto, Ontario (Virtual)
Sept. 2020 to Current

BMO Capital Markets
Software Engineering Intern

Toronto, Ontario
Jan. 2020 to Apr. 2020

- Developed multiple internal tools and applications on the .NET framework, mainly interacting with the BMO Mesh network.
- Automated several manual Excel pricing calculation tasks, now using .NET automation tasks, to increase the speed and efficiency of the in-house workflow.
- Developed a dependency graph similar to the Microsoft Excel algorithm to create and manage an implied market for Canadian bonds using real-time prices.
- Used recursive solutions, event-based solutions, and graphing techniques to lower the memory and CPU usage of graph updates.
- Employed real-time programming techniques to ensure the product functioned under critical time & resource constraints.

Mitel Networks
DevOps SRE Intern

Kanata, Ontario
May 2019 to Aug. 2019

- Used Protractor and the Jasmine framework to automate the testing of an Angular web application, verifying the front-end components and the back-end CloudLink components are functioning as intended.
- Automated the factory resetting and on-boarding of multi-line PBX telephone systems using SSH2 connections and CLI commands to make it easier for teams to run tests on and interact with their new systems.
- Created a CLI tool for teams to create and restore Elasticsearch and DynamoDB backups using AWS functions and commands.
- Worked with AWS serverless computing by writing a Lambda function to run nightly backups to increase functionality, speed, and lower cost from the previous Batch Job implementation for continuous integration.
- Investigated the use of SIP connections and WebRTC to make calls and send instant messages using a Node.JS client.

+ projects

Packing Heat (uOttahack 3 Top 20)

- iOS / Android application developed using Flutter (Google's UI Toolkit) and Dart designed around distributing same-day product delivery to drivers.
- Implemented a Google Maps view using the Directions API and Maps SDK to provide users routes and waypoints along the shortest path for delivery.

Ez-Transfer (2nd Place DeltaHacks)

- Java Android application designed around making easy crypto-currency transfers to others, built onto the Algorand blockchain.
- Developed using a Node.JS (Express) backend.
- Involved investigation & research of different Blockchain and Cryptocurrency applications, including how we could best use this technology.
- Employed authentication and database techniques.

Stock Clock

- Made use of Chrome's Notification API to send alerts straight to the users browser when their tracked stocks have reached their desired prices.
- Utilized Chrome's Storage API to save user specific data, such as high & low price associated with tickers.
- Wrote a script to constantly request stock data using the IEX Cloud API while the extension is running in the browser.

+ education

University of Ottawa
Sept. 2018 to Current

Bachelor of Applied Science Software Engineering 2022

+ skills

PROGRAMMING LANGUAGES	TECHNOLOGIES & FRAMEWORKS	AREAS OF EXPERTISE
Java	Node.JS	Web Development (Full Stack)
JavaScript	.NET	App Development
C#	Flutter	Algorithm Development
Dart	React / React Native	Machine Learning
Python	Cloud (Google, AWS)	Deep Learning
TypeScript	Firebase	IoT
SQL	Bootstrap	Quality Assurance
C	MongoDB	
	Unity	
	Express.JS	
	MQTT	
	NPM	

+ certifications

Machine Learning A-Z

Fundamentals of Machine Learning techniques including regression, clustering, reinforcement learning.

Deep Learning A-Z

Fundamentals of Deep Learning including convolutional, artificial, and recurrent neural networks

The Web Developer Bootcamp

Fundamentals of Web Development including Node.JS back-end development, HTML / CSS front-end development, and node package management.