Michael DaRocha

University of Waterloo · Computer Science · Software Engineering Option

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Skills

Languages: HTML • CSS • JavaScript • TypeScript • Java • C# • Python • SQL • GraphQL • Bash • C++ • C

Technologies: Angular • React • Express • .NET • Spring Boot • MongoDB • PostgreSQL • MySQL

Infrastructure: Azure • AWS • Docker • Git • GitHub Actions

Experience

Data Science & Advance Analytics Co-op, TD Bank Group

September 2022 – December 2022

- Designed and implemented project tracking web app utilizing React, Redux, Express and MySQL.
  - Utilized Axios and Redux middleware to fetch project data from REST API.
  - Implemented REST API using Express to support CRUD operations on MySQL database.
  - Designed MySQL database for project data. Ensured compliance with 3NF.
- Debugged, updated, and documented Angular web application used by management for tracking.
  - Implemented an improved sorting algorithm to increase efficiency of Java backend code.
- Constructed decision tree for event planning based on event data. Used Python, Pandas and NumPy.

Co-op Analyst – Systems Engineering, Toyota Motor Manufacturing Canada

September 2021 – March 2022

- Lead developer for web application used to generate internal delivery lists. Utilized Angular, .NET and PostgreSQL. Followed Agile development practices. Implemented prototype approved by management.
- Improved UI of Angular web application used for vehicle tracking and ensured compatibility with mobile.
- Implemented scheduler utilizing Spring Boot for deletion of unnecessary files to prevent freezing.
- Debugged and improved accuracy of Python scripts utilizing OpenCV to detect defects.
- Created pipelines in both Azure and GitHub for comparison. Presented findings to upper management.

Engineering Undergraduate Research Assistant - Blockchain Application Developer

University of Waterloo

January 2021 – April 2021

- Assisted with the creation of a C++ based Blockchain voting application.
- Used OpenSSL to implement cryptographic algorithms such as Shamir's Secret Sharing algorithm.
- Implemented data structure used for storage of large unsigned numbers and numerical computations.

Education & Awards

Bachelor of Computer Science, Software Engineering Option, Honours
University of Waterloo, September 2018 – June 2023

2019 University of Waterloo President's Scholarship of Distinction

2022 University of Waterloo President's Research Award