RUSSELL CROUCH

Geomatics Undergraduate Student

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EDUCATION

Bachelor of Environmental Studies Honours Geomatics (Co-Op) Computing Minor

University of Waterloo

📅 September 2021 - current

🎓 3.9 GPA

Relevant courses

- Data-Intensive Distributed Analytics
- Algorithm Design and Data Abstraction
- Networks & Distributed Computer Systems
- Data Types and Structures
- Compilers & Computer Systems
- Applications in Software Engineering
- Algorithm Design & Data Abstraction
- Computer Applications in Business Databases
- Multivariate Statistics
- Advanced GIS
- Advanced Remote Sensing + Spatial Databases

SKILLS

- HTML/CSS
- Typescript/JavaScript (NodeJS, React)
- Python + Spark + R + SQL
- C + Linux
- AWS (EC2, S3, Lambda, SageMaker AI)
- PHP + CMS (Drupal, Wordpress)
- Bash/Shell + Git
- PCI Geomatica/Catalyst Earth
- ArcGIS Pro/Online + QGIS

CAREER OBJECTIVE

Passionate, hard-working, and solution-oriented individual with an intense desire to learn and adapt. Always seeking to improve and expand upon software skills and knowledge. Consistently demonstrates excellent communication and collaboration to increase functionality, productivity, effectiveness and performance. I am always eager to take advantage of any opportunity that arises and to grow and learn from experienced team members. Devoted to progressing within the software industry as a valuable asset by any means necessary.

WORK EXPERIENCE

Software Quality

Miovision

📅 May 2025 - December 2025   📍 Waterloo, Ontario

- Collaborated with dev teams, ensuring high quality standards throughout the development of new traffic products, via manual and automated testing.
- Engineered comprehensive and efficient automated workflow and UI tests for signal optimization, computer vision and report generation related artifacts, enhancing quality, accuracy and speed across 3 major product lines.
- Played key role in drastic company-wide software Change Failure Rate improvements through meticulous attention to detail, decreasing from 40% to 5.6%. Leveraged Cypress and Playwright testing frameworks.

QA Software Developer

University of Waterloo IST - WCMS Team

📅 May 2024 - August 2024   📍 Waterloo, Ontario

- Played an important role on the WCMS team, working within an agile environment to enhance the universities' largest front-facing website.
- Quickly became proficient in PHP testing tools (Codeception/Selenium), using it to drastically improve dynamic test automation.
- Created a fast, robust and automated test suite for the uWaterloo API v3.0 from scratch, with 100% coverage of all data queries.
- Assisted senior developer in locating error points within the codebase, swiftly and aptly pushing fixes through constantly expanding problem-solving capabilities and technological agility.

Engineering Database Maintainer/QA Developer

Route This - Certify Team

📅 September 2023 - December 2023   📍 Kitchener, Ontario

- Developed test suites using TestRail to support IOS testing of features and bug fix updates for the Certify application. Swift XCUI test automation.
- Maintained global footprint database, ensuring coverage and accuracy in client zones by using ML object detection tools on satellite imagery.

PROJECTS

Spam Detection Model

- Employed ML + SGD techniques using PySpark to train an email spam detector over a distributed network with a consistent AUC accuracy of ~0.85.

Food Insecurity Study & Analysis

- Conducted thorough examination of food insecurity in London, Ontario. Proposed visual and informed solutions through multidimensional network analysis using extensive data extraction and classification methods.