Kyle Mackenzie

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TECHNICAL SKILLS

Languages: Java, JavaScript, C++, Python, SQL, HTML/CSS
Frameworks / Packages: React, MongoDB, Node.js, JUnit, NumPy & Pandas, TensorFlow, Selenium
Tools/Environments: Git, Docker, MongoDB, Jupyter Notebooks

EDUCATION

University of British Columbia   Vancouver, BC
Engineering Physics - Bachelor of Applied Science   *Sep. 2020 - May 2025 (expected)*
Coursework: Software Design, Linear Circuits, Experimental Techniques, Multi-variable and Vector Calculus.

RELEVANT EXPERIENCE

Full-Stack Developer Co-op   Jan. 2022 – Apr. 2022
ICBC   *Vancouver, BC*
- Produced automation solutions while improving development time by 50% compared to company standard.
- Developed prototype for automation of company process to reduce labour and resources spent and expedite results to customers.
- Rapidly developed test cases for complex internal web application to minimize risk of bugs in production during upgrades, using economic and innovative architectural decisions.
- Prototyped a 3D, gamified version of current ICBC Knowledge Practice Test to increase customer engagement and learning, and improve road safety.

Drivetrain Firmware Developer   Sep. 2022 – Present
UBC Formula Electric Student Design Team   *Vancouver, BC*
- Developed traction control algorithms to react to slipping in real-time and auto-correct to stabilize car.
- Researched and documented experimental control algorithms for high-performance electric cars.

Front-End Developer   May 2021 – Sep. 2021
Charlene's Web Services   *Remote*
- Developed a slideshow application using JS, express.js, HTML/CSS for deployment on WordPress marketplace.

Embedded Systems Developer   Jan. 2021 – Sep. 2021
UBC Solar Student Design Team   *Vancouver, BC*
- Developed multi-threaded communication firmware for micro-controllers to communicate through serial, radio, and cellular for real-time data acquisition during solar car races.
- Wrote documentation for embedded software algorithm to ensure complete understanding for future employees.

TECHNICAL PROJECTS

Social Network Analysis Project | *3 person project - Java, Git, JUnit*   Oct. 2021
- Developed a Graph data structure to represent relationships between co-workers from a company's email records.
- Implemented methods for depth-first and breadth-first search, as well as finding the shortest path between 2 users.

Online To-Do List | *JavaScript, Node.js, Heroku, Express.js, MongoDB, HTML/CSS*   Aug. 2021
- Developed a database-powered web application in Node.js front to back.
- Implemented a MongoDB database to store users' lists locally for revisiting.

Image Classifier | *Python, TensorFlow, Google Colab Notebooks*   Sep. 2020 – Oct. 2020
- Employed and trained a neural network to identify clothing items with over 90% accuracy.

INTERESTS

Hiking • Robotics • Music Production • Web Design