

Robbie Laughlen

+1 (604) 3526012 | robbie@laughlen.com | robbie.laughlen.com | linkedin.com/in/robertlaughlen

Education

University of British Columbia

BSc Combined Computer Science and Physics

- Dean's Honour List

Vancouver, Canada

Sept 2020 - April 2025

Experience

MineSense | 7x Global Cleantech 100

XRF and VNIR Integration Co-op

- Conducted high-voltage testing and contributed to research with the goal of improving MineSense technology, focusing on their ShovelSense system.
- Developed software to interact with x-ray detector hardware and output metrics as an improved user experience.

Vancouver, BC

May 2022 - Jan 2023

UBC Instructional Support and Information Technology Office

Project Assistant

- Executed maintenance tasks and provided technical support across a diverse range of situations.
- Collaborated with the team to implement software updates, diagnose hardware issues, and ensure smooth functioning of instructional technology.

Vancouver, BC

Sept 2023 - May 2024

Projects

yapyap | React Native, Python, Tensorflow, MongoDB, AWS

nwHacks Project Winner

- Co-developed 'yapyap', a unique and innovative platform that leverages the therapeutic benefits of journaling, providing a space for users to share their thoughts while maintaining a sense of safety and authenticity.
- Utilized a comprehensive tech stack, including React Native for mobile development, Figma for UI/UX design, AWS for cloud services, and TensorFlow for machine learning, showcasing proficiency in a diverse set of technologies.
- Incorporated a Bidirectional Recurrent Neural Network (RNN) as a sentiment analyzer to analyze emotions within journal entries.
- Integrated Amazon Web Services (AWS) Lambda and API Gateway to establish an efficient API for reading and modifying the MongoDB database.

Vancouver, BC

2024

X-ray Detector Analytics Program | Python, Dash, Linux, Qt

Minesense

- Utilized the Dash framework to develop an interactive interface for seamless interaction with the Ketek VIAMP H50 detector, enabling efficient data collection and analysis. Showcasing various metrics including radiation count rate.
- Designed and created a dynamic live graphing service for XRF data using Python in conjunction with the powerful Dash framework, facilitating real-time visualization and analysis of data trends for enhanced insights and decision-making.

Vancouver, BC

2022

Multiband Compressor Audio Plugin | C++, JUCE

Personal Project

- Developed an advanced audio processing application featuring a 3-Band Compressor with Spectrum Analyzer, leveraging the JUCE framework and modern C++ for real-time audio signal manipulation.
- Focused on integrating digital signal processing algorithms, GUI design, and efficient coding practices to enhance expertise in modern C++ and audio engineering.

Vancouver, BC

2024

Skills

Languages Python, HTML/CSS, JavaScript, C/C++, R, Java, Typescript

Software Git/GitHub, Visual Studio Code, IntelliJ IDEA

Technologies React, React Native, Node.js, Flask, Dash, Qt, Expo, JUCE

Achievements

2024 **Best Design, Community and Connection Track Winner**, nwHacks

2023 **Research Grant**, Google Vulnerability - LLM bugSWAT

2022 **Best Music (x2)**, UBC Game Developer Awards

BC

BC

BC