

Edward Leung

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SUMMARY

Motivated master's student in Electrical and Computer Engineering with over **two years** of hands-on experience in **scripting, data analysis, and research**. Developed automated experimental procedures and tools, showcasing strong problem-solving skills and the ability to optimize processes. Proficient in **Python, Java, and MATLAB**, with a solid foundation in **statistical analysis, modeling, and algorithms**. Versatile in applying technical expertise to a variety of projects and sectors, **ensuring impactful outcomes and informed decision-making**.

EDUCATION

UNIVERSITY OF BRITISH COLUMBIA

Expected April 2025

Master of Applied Science, Electrical and Computer Engineering

NSERC CREATE in Quantum Computing Scholar, MITACS Accelerate

YORK UNIVERSITY

April 2022

Honours Bachelor of Engineering, Computer Engineering

Member of the Dean's Honour Roll 2019-20

CGPA: 3.44/4.0

RESEARCH EXPERIENCE

UNIVERSITY OF BRITISH COLUMBIA

September 2022 – Current

Graduate Researcher

- Developed and implemented **Python** scripts and **data analysis tools** in **Jupyter Notebook** to **automate complex experimental procedures, enhancing data collection efficiency and accuracy** while streamlining the interpretation of experimental results.
- Analyzed** experimental data from cryogenic and photonic systems to **identify trends, optimize procedures, and inform decision-making on subsequent experiments** using **Python** packages such as **NumPy** and **matplotlib**.

MCGILL UNIVERSITY

May 2021 – August 2021

Undergraduate Researcher, Internship

- Collaborated with senior researchers to **simulate and analyze** the impact of noise in Optical Neural Networks (ONNs) using the **Python** library Neuroptica, while applying **machine learning techniques** to enhance the accuracy of **multi-layered models** on the MNIST dataset.

BANK OF MONTREAL FINANCIAL GROUP

May 2020 – December 2020

Application Developer, Internship

- Developed** new features for a **Java-based desktop application** managing users and permissions on a **mainframe** with **SQL**, collaborating with QA to ensure software reliability through thorough **regression testing**.

EXTRACURRICULARS AND RELATED PROJECTS

QUANTUM MACHINE LEARNING WORKSHOP

January 2024

- Explored the intersection of **quantum computing** and **machine learning** by studying key quantum algorithms such as quantum neural networks (QNNs) and variational quantum classifiers (VQCs), while gaining practical experience with Qiskit and **Python** to implement **quantum machine learning models**.

COKE-PEPSI CLASSIFIER

May 2020

- Developed a classifier using a pre-trained ResNet-34 convolutional neural network to distinguish between Coca-Cola and Pepsi images. Manually **cleaned and transformed the dataset to enhance classification**, and trained the model with varying learning rates, achieving **97.2% accuracy** on the testing set.

TECHNICAL SKILLS

Operating Systems: Windows, Ubuntu

Programming Languages/Packages: Python, Java, C, Octave/MATLAB, Pennylane, Qiskit, NumPy, Matplotlib

Tools: Jupyter Notebook, Microsoft Office Suite, Unix Terminal, Git/GitHub, G Suite

Interpersonal: Time Mgmt., Problem-Solving, Adaptability, Team-oriented, Works well under pressure, Goal-oriented