

Carter Conboy

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Objective

Graduate Data Science student seeking a Co-op opportunity in Data Science or Data Engineering to apply technical skills and innovative solutions to environmental research and conservation efforts.

Highlights

- **Data Workflows:** Highly competent in collecting, modelling, transforming, visualizing and analysing structured to unstructured data. Technical skill with Pytorch, Matplot, Pandas, Numpy, Sci-kit Learn, CUDA, SQL, PySpark, MongoDB, Neo4j, PineconeDB and Sharepoint Lists.
- **Programming and Scripting Languages:** Extensive experience working with data in Python and MATLAB. Engineered Full-Stack web application for DND and contributed to multiple public facing projects for university design teams (QHacks, QVFT) with JavaScript, C#, CSS, HTML, REST APIs, Node and React.
- **Data Analytics and Machine Learning:** Produced diverse set of projects in exploratory data analysis and ML. Examples include handwritten digit recognition, cancer cell diagnosis, stock exchange regional analysis, troll tweet pattern detection and card game natural language processing.
- **Process Automation:** Skilled in the development, deployment and operation of reliable and efficient automated processes. Built several automated tools for non-trivial vulnerability scanning and account management tasks. Technologies include Bash, Powershell, Power Automate, Snakemake and Nextflow.
- **Collaboration:** Ability to excel in a distributed and collaborative team environment, exemplified by success in two remote/hybrid internships. Experience with Git, GitHub, Azure Devops and Agile Methodologies.

Work Experience as Developer

IT Developer

Queen's University IT Services

04/2023 – 08/2024

Kingston ON (Hybrid)

- Designed and built a user-focused MFA management application for network administrators (relied upon for a 3K+ user base).
- Programmed several key automation projects for identity management tasks including data collection and migration.
- Developed expertise in hybrid IT infrastructures, command shell programming and REST APIs.
- Success exemplified by multiple contract extensions beyond the initial 4-Month term.

Junior Security Developer

DND Information Management Engineering

04/2021 – 01/2022

Ottawa ON (Remote)

- Led the redesign and full-stack migration of a large .NET web application and relational data model to meet a variety of stakeholder requirements.
- Project received executive approval from DND's Chief Cyber Security Architect resulting in a contract extension for continued development.

Data Science Projects

Marine Mammal Vocalization Analysis

01/2024 – 05/2024

- Built a highly performant solution for multiclass classification of Marine Mammal Vocalizations with a convolutional neural network.
- Developed parallelized data collection and transformation pipeline in Python.
- Explored the combination of signal processing and computer vision techniques for feature extraction and data visualization.

DNA Function Prediction Model

09/2024 – 12/2024

- Re-engineered hybrid neural network for the prediction of non-coding DNA function in Python.
- Matched performance (0.932 AUC ROC), eliminated 3 deprecated dependencies, and reduced required training memory by 94%.

Education

MEng Applied Data Science

09/2024 – Present

University of Victoria

Victoria BC

- Notable Coursework: Algorithms and Data Models for Data Science, Advanced Topics in Bioinformatics, Optimization for Machine Learning, Systems for Massive Datasets, Music Information Retrieval. Final academic term ends September 2025.

BASc Computer Engineering

09/2019 – 04/2024

Queen's University

Kingston ON

- Notable Coursework: Distributed Systems, Comp Vision with Deep Learning, Machine Learning & Deep Learning, Database Management Systems, Data Analytics, Software Quality Assurance, Performance Analysis. Graduated First Class Honours.

Interests

- Immersion into the natural world through climbing, hiking, camping, bikepacking and foraging. Spent a summer planting trees (rookie planting record) and biked across Spain and France.
- Avid designer and enjoyer of tabletop and strategy games.

References

Lauren MacLean

- Senior App Administrator | Email & M365 Team | Queen's IT Services
- Manager and Mentor at Queen's IT Services
- 613-533-6096 x36096 | lauren.maclean@queensu.ca

Major Edward Li

- Science Officer | Defence Research and Development Canada | Canadian Armed Forces
- Manager and Mentor at DND
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