MEGAN SORENSON

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Computer Science

EXPERIENCE

Software Developer Co-op
SAP

May - August 2023 Vancouver, BC

- Incorporated a new data source into processing pipeline/microservice, including manifest configuration with updated authorizations and sql mapping.
- Added a Microsoft Teams notification service for a backend engine which eliminated a **30 minute** code validation with every deployment.
- Upgraded Linux Kernel and Python version (3.6 to 3.11) across codebase without impacting production.
- Wrote Python unit tests to increase code coverage from **53% to 96%** using unittest and mock frameworks.
- Independently debugged and fixed production issues brought to the development team from external and internal sources.
- Modularized codebase which reduced line duplication by **10%** and improved overall code readability and testability.
- *Utilized:* Python, SQL, REST API, Flask, Jenkins, Honeycomb, SonarQube, GitHub, Agile Development

Machine Learning Developer Co-op
SAP

January - April 2023 Vancouver, BC

- Fully migrated a deprecated ML microservice onto a new platform (Azure Databricks and Data Lake) to continue service of product.
- Created a cluster analysis POC leading to the creation of an AI/ML innovation team to produce similar POCs for relevant business problems.
- Debugged and reformatted preprocessing pipeline which fixed previously uncaught model accuracy issues.
- Retrained NLP classification models in **4** different languages by adding **500,000** new labeled data points.
- Created NLP classification models that improved accuracies by **10%** to reallocate the efforts of **1 FTE**.
- Responsible for hiring and onboarding of replacement intern.
- *Utilized:* Python, SQL, scikit-learn, Azure ML Services, Machine Learning, NLP, Data Processing, Data Lake

Data Science Intern
University of Calgary, Canadian Animal Task Force

May – September 2021 Calgary, AB

- Independent project resulting in a published academic paper that utilized a decade's worth of raw data to determine whether it could be used to effectively assess impact of spay-neuter clinic charities in Alberta.
- Identified changes for the organization's data collection methods to allow for future assessments; data collection feedback was implemented in over a dozen clinics in 2022.
- *Utilized:* R, Data Analysis, Data Cleaning, Data Communication, Research

SKILLS/COURSEWORK

Python | Java | SQL | C++ | R | HTML | CSS | JavaScript | Data Structures | Algorithms | REST APIs | Flask | pandas | Machine Learning | Data Visualization | Data Cleaning | Git/GitHub | Jenkins

EDUCATION

3rd Year Bachelor of Computer Science (BCS)
University of British Columbia, GPA: 4.3/4.3

September 2022 – May 2025

BSc. Environmental and Conservation Sciences in Conservation Biology
University of Alberta, GPA: 3.7/4.0

September 2017 – May 2022

PROJECTS

2nd Place: ChatGPT Youtube Video Q&A Chrome Extension [GitHub]
March 2023

- Utilized the OpenAI API and YouTube API to summarize and provide Q&A functionality for any YouTube video with available captions.
- Lead the creation of the backend server and aided in integrating the Chrome Extension's UI into YouTube's video-play bar.
- *Utilized:* Python, JavaScript, ChatGPT, Flask, Chrome Extensions

Parking Airbnb: NwHacks 2023 Project [GitHub]
January 2023

- Created a web application that allows users to post and book parking spaces and manage their stalls and bookings.
- Lead the creation of the database and backend server using sqlite and Flask, and helped the frontend team integrate our API into their code.
- *Utilized:* Python, Flask, JavaScript, CSS, HTML, full stack

World Of Wordle Java Application [GitHub]
September 2022 - December 2022

- Created a wordle-inspired Java application with extended options to play simultaneously with one, two, or three boards.
- Utilized Java Swing to create a GUI where guesses are color populated based on their accuracy and included serialization of game state to allow time-interupted playing.
- Created a unit testing suite with 100 percent code coverage.
- *Utilized:* Java, JUnit, json Serialization, Event Logging, Software Construction