

MEGAN SORENSON

Searching for: Coop Fall/Winter 2023

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Computer Science

EXPERIENCE

Muskoxen Data Project

University of Calgary

August 2022 – Ongoing

Calgary, AB

- Responsible for data cleaning, manipulation, and to determine which variable has the highest contribution to determining hoof health to facilitate community data collection in Northern Canada.
- Collaborative project to describe the characteristics of a healthy muskoxen hoof to ultimately create a baseline for future analyses.

Data Science Intern

University of Calgary

May – September 2021

Calgary, AB

- Independent project in collaboration with the Canadian Animal Task Force (CATF) and Dogs Trust Worldwide.
- Analyzed the effectiveness of dog clinics over time using canine clinic data.
- Outlined changes for the organization's data collection methods to improve the quality of future assessments; feedback implemented in 2022 clinic data collection.

Sustainability R&D Co-op

Gaia Protein

January – June 2021

Calgary, AB

- Provided the literature basis for improving the sustainability and efficiency of cricket farming practices within the company.
- Created a handbook used for new-hires at the company as of June 2021.

PROJECTS

Canine BCS Approximator [Abstract]

May – September 2021

- Developed a novel method for accurately approximating canine body condition score (BCS) using canine data and historical growth curves.
- Created opportunities to assess the impact of dog clinics where BCS data was not collected from veterinarians and volunteers.
- Utilized: R, Python, Statistics, Data Science

Optimal Shipping Routes in the Atlantic [GitHub]

September 2021 – January 2022

- A GIS project that utilized historical datasets by creating optimal shipping routes that avoid 90 percent of zooplankton hotspots.
- Contributed to the academic knowledge base by developing a cost-surface raster layer that was minimized for distance and plankton abundance.
- Utilized: ArcGIS Pro, Spatial Statistics, Story Maps, Python

Arthropod Data Project [GitHub]

September 2021 – January 2022

- Determined whether there was a correlation between climate variables and insect abundance using two decades of presence/absence data.
- Applied bootstrapping methods to find what combination of temporal climatic events would result in a boom/bust for an insect group.
- Utilized: R, Data Science, Data Visualization

EDUCATION

3rd Year Bachelor of Computer Science (BCS)

University of British Columbia

September 2022 – May 2025

BSc. Environmental and Conservation Sciences in Conservation Biology

University of Alberta, GPA: 3.7

September 2017 – May 2022

SKILLS/COURSEWORK

Python R HTML CSS Java
JavaScript Git/GitHub LaTeX GIS
Pygame dplyr tidyverse ggplot2
Spatial Statistics Data Visualization
Data Cleaning Regression Analysis

OTHER WORK

Head Teaching Assistant

University of Alberta

September 2020 – May 2022

- Lead a laboratory session of 20 undergraduate students in the Department of Renewable Resources.

Battlesnake Competition Team Member

UBC Data Science Club

September 2022 – Ongoing

- Using reinforcement learning to compete in a 2D grid world against multiple other agents.

World of Wordle

September 2022 – Ongoing

- A wordle-inspired Java application where players can choose to guess one, two, or three words simultaneously while trying to maximize their score.
- Includes serialization of game state to allow time-interrupted playing of a single game.

NASA Space Apps Web App [GitHub]

October 2022

- A JavaScript game made using Phaser 3 that lets the player collect space garbage while avoiding obstacles generated using real solar data.

Fridge Poetry App [Web App]

August 2022

- A simple web application made using HTML, CSS, and JavaScript where you can create and share fridge poetry.