

# Carlos Serrouya

Calgary — T2M 4H1 — [carlos.serrouya@ucalgary.ca](mailto:carlos.serrouya@ucalgary.ca) — 250-837-1041

## WORK EXPERIENCE AND PERSONAL PROJECTS

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<b>Data Science Intern</b>	<i>Wildtrax</i>	2024
<ul style="list-style-type: none"><li>Built a model to reduce false positives in Microsoft's Megadetector, lowering the false positive rate by 72% and the false negative rate by 9%.</li><li>Utilized SQL to create a comprehensive dataset from existing website data, then employed Python to perform regression analysis and train a multiple regression model.</li><li>Integrated the regression model into an SQL function to streamline model production.</li><li>Visualized variables and model performance with descriptive graphs using Matplotlib and Seaborn.</li><li>Developed scripts on Linux Ubuntu servers to convert hundreds of terabytes of images and audio files to FLAC and PNG, with lower-resolution files backed up for disaster recovery.</li></ul>		
<b>Data Science Intern</b>	<i>Alberta Biodiversity Monitoring Institute</i>	2023
<ul style="list-style-type: none"><li>Developed machine learning models to identify snow depth and coverage in camera trap images.</li><li>Utilized Keras/TensorFlow and Scikit-learn to implement semantic segmentation models using U-net, linear models using neural networks and regressions, and classification models using transfer learning and random forests.</li><li>Optimized image processing using NumPy and Pillow, and minimized RAM and VRAM usage during model training.</li><li>Created algorithms for object contouring, object detection, and outlier detection.</li><li>Used Pandas to manage, edit, and read large CSV/Excel files.</li><li>Presented results to a biology and ecology panel, communicating technical machine learning concepts to a non-technical audience.</li><li>Achieved 84% accuracy in identifying snow depth 96% accuracy in classifying snow coverage.</li></ul>		
<b>Personal Project</b>	<i>NFL Score Prediction Model</i>	2023
<ul style="list-style-type: none"><li>Used BeautifulSoup for web scraping sports stats websites to gather data.</li><li>Developed a predictive model for NFL game outcomes using a compiled dataset.</li></ul>		
<b>Server/Bartender/Host</b>	<i>Village Idiot Bar and Grill</i>	2016-2021
<ul style="list-style-type: none"><li>Worked in a high-paced environment, handled customer interactions, and managed cash transactions.</li><li>Operated as part of a team, handling thousands of dollars each shift.</li></ul>		
<b>Basketball Coach</b>	<i>Revelstoke Secondary School</i>	2019-2021
<ul style="list-style-type: none"><li>Volunteered to coach U13 basketball team while serving as the varsity team captain.</li><li>Organized drills, coached games, and led practices.</li><li>Awarded the Terry Bidel award for community athletic leadership and achievement.</li></ul>		

## EDUCATION AND CERTIFICATIONS

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<b>University of Calgary</b>		<b>Coursera</b>	
<i>BSc Computer Science</i>	2022-2026	<i>Advanced Learning Algorithms</i>	2023
<i>BSc Mathematics</i>	2021-2026	<i>Regression &amp; Classification</i>	2023