

# RYAN RAY

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## HIGHLIGHTS OF QUALIFICATIONS

- **Remote Field Work Experience:** Experienced in traveling to remote locations, engaging in long and demanding fieldwork.
- **Academic Excellence:** 3rd-year ecology major pursuing a Bachelor of Science at the University of Calgary. Studies encompass a broad range of relevant fields including Ecology, Environmental Science, Biology, Wildlife, Geography, and Geology.
- **Technical Proficiency:** Collected and analyzed soils, performed vegetation surveys, and processed drone data using ArcGIS Pro. Wrote code to utilize field data for training machine learning models.
- **Team Collaboration:** Adept at working in team environments, coordinating effectively to achieve common goals. Demonstrated effective teamwork in various roles.
- **Computer Skills:** Proficient in various software and coding languages, enhancing data analysis and project optimization.
- **Problem Solving:** Strong analytical and problem-solving skills, strategically optimizing approaches to fulfill tasks efficiently.
- **Off-Road Vehicle Operation:** Experienced in driving and operating off-road vehicles, including ATVs, motorbikes, and UTVs.

## TECHNICAL SKILLS

**Data Analytics:** Jupyter notebooks, EpiCollect5, Field Maps, Survey123, ArcPro, ArcGIS Online, QGIS, FLM/BERA Tools, RStudio, and Microsoft Office.

**Mathematics:** Statistical applications in biology, calculus, linear algebra

**Plant Identification:** Boreal wetland (ecotypes), bryophytes, graminoids

**Field work:** Operating off-road vehicles, boreal forest, wetlands

**Lab Techniques:** Cell biology, genetics, chemistry, organic chemistry

**Instrumentation:** RTK, PH readers

**Programming Language:** Python, R, HTML

**ML Frameworks:** PyTorch, TensorFlow, KERAS U-Net

## EDUCATION & CERTIFICATIONS

**Bachelor of Science, Major in Ecology**  
University of Calgary

**Currently enrolled, 3rd year**

## EXPERIENCE

**Research Assistant**

**April 2023 – Dec. 2024**

BERA Research Group, University of Calgary

- Conducted vegetation and RTK surveys in remote northern Alberta locations, identifying plant species in the boreal forest/wetlands.
- Collected and processed 300+ soil samples from various field sites
- Trained convolutional neural network machine learning models for feature detection using drone imagery data.
- Developed a web-based chatbot, utilizing transformer model API paired with Pinecone for vector storage. Utilized Streamlit for an interface to interact with 300 research papers for information retrieval.
- Assisted in geospatial data analysis in the lab and contributed to the Boreal Ecosystem Recovery and Assessment (BERA) group project.
- Supported field logistics, ensuring equipment preparedness and maintenance.

**Customer Service Representative****Oct. 2019 – July 2020**

Inglewood Servus Credit Union, Calgary AB

- Demonstrated strong attention to detail by carefully maintaining and reconciling cash drawer, processing cash transactions, and accounting for all currency and coins.
- Provided exceptional customer service to members by conducting various account transactions and offering financial guidance and advice as needed.
- Showcased versatility and adaptability by successfully completing a variety of special requests, such as closing accounts, taking cheque orders, exchanging foreign currencies, and fulfilling special statements, copies, and referrals.

**Delivery Driver****Mar. 2018 – Aug. 2018**

Mas Pro Oilfield Supply, Red Deer AB

- Exemplified strong organizational skills by effectively planning and coordinating transportation of materials, while ensuring timely fulfillment of customer orders.
- Maintained a reliable transportation schedule by delivering large shipments from Red Deer to Slave Lake on a consistent weekly basis.
- Prioritized safety in the workplace by performing general warehouse duties and ensuring regular cleanups were carried out.

**Parkour Coach****Oct. 2017 – Aug. 2018**

Premier Academy Cheerleading &amp; Tumbling, Red Deer AB

- Showcased creativity and instructional abilities by designing and implementing effective lesson plans for parkour classes.
- Fostered a supportive and motivational environment by providing personalized one-on-one instruction to parkour students.
- Empowered students to excel in parkour by teaching them the fundamental principles and safe practices essential for success.

**VOLUNTEER WORK****Volunteer Laborer****Aug 25<sup>th</sup>, 2021***Friends of Kananaskis Country**Bow Valley Provincial Park, AB*

- Collaborated with a team to maintain the Bow Valley Trail by removing overgrowth, ensuring a natural and safe user experience.

**INTERESTS**

- **Hiking:** Enthusiastic about embarking on multiday hikes, exploring challenging terrains. Some of which include: Juan de Fuca Trail (47km), The Rockwall (56km), Heikos Trail (43km), Tonquin Valley Trail (42km).
- **Mushroom Cultivation:** cultivated a variety of edible mushrooms such as lion's mane, cordyceps, reishi, oyster and chestnut mushrooms.
- **Reading:** derive pleasure in reading nonfiction literature, I am passionate about knowledge and understanding the natural world.
- **Yoga:** regularly practice yoga for flexibility and general health.
- **Tricking:** Skilled martial arts tricking athlete. Dedicated to mastering challenging flipping movements.
- **Foraging:** enjoy identifying and collecting edible plants and mushrooms