

# Eron Macartney

eronmac08@gmail.com

(206) 445-4396

Vancouver, BC V5N 1V8

*Dedicated GIS and Geomatics Specialist with a Master's in Geomatics for Environmental Management and experience in spatial data analysis, predictive modeling, and environmental research. Proficient in ArcGIS Pro, R, and Python, with a proven track record of developing predictive models for environmental applications.*

## EDUCATION

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### University of British Columbia - Master of Geomatics for Environmental Management

Expected April 2025

#### Relevant courses

- Advanced Geographic Information Systems for Environmental Management
- Remote Sensing for Ecosystem Management
- Advanced Earth Observation and Image Processing
- Geospatial Data Analysis
- Spatial Statistics
- Landscape Ecology and Management

### Western Washington University - Bachelor of Science, Marine Ecology

December 2018, GPA: 3.81

## WORK EXPERIENCE

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### Washington Department of Fish and Wildlife - Biological Science Technician 2

March 2023 - August 2024

Bellingham, WA

- Engineered comprehensive salmon spawning maps utilizing ArcGIS Pro, uncovering 20 new potential streams in non-surveyed regions.
- Mapped over 2,500 fish redds using ArcGIS Pro, R, and Excel, providing critical spatial data for seven fish species.
- Analyzed maps and graphs created with R and ArcGIS to determine current and future salmon/steelhead runs to set local recreational fishing seasons and regulations.
- Collected and analyzed biological samples, including species identification, DNA, scales, lengths, weights, sex, otoliths, and coded wire tags (CWTs).

### Washington Department of Fish and Wildlife - Biological Science Technician 2

March 2022 - February 2023

La Conner, WA

- Managed and analyzed spatial data to evaluate fish population dynamics, biodiversity and inform management decisions.
- Developed detailed maps and reports for stakeholders, regulatory agencies, and the general public.
- Executed standard lake surveys across 15 Washington lakes using electrofishing fyke nets and tanglenets, cataloging over 35 species of fish.
- Operated and maintained boats for creel surveys on local lakes.

### Washington Department of Fish and Wildlife - Biological Science Technician 2

August 2021 - December 2021

Twisp, WA

- Quantified outmigration of salmonid smolt populations, predicting adult returns by assessing mortality rates due to dams using GIS and R for data analysis.
- Captured, identified, biosampled, and PIT-tagged juvenile/adult ESA-listed salmonids and fish species via rotary screw trap.
- Entered, managed, and uploaded juvenile PIT tagging files into P4 to conduct queries in PTAGIS and Access databases.

### US Fish and Wildlife Service - Biological Science Technician

March 2021 - June 2021

Winthrop, WA

- Created fish presence maps via ArcGIS to aid in the collection of steelhead broodstock.

- Identified, PIT-tagged, Floy-tagged, and biosampled adult steelhead trout.
- Conducted steelhead spawning ground surveys.

## PROJECTS AND PROFESSIONAL DEVELOPMENT

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- Predictive Modeling of Pacific Herring Spawning: Applied GIS and statistical analysis to predict spawning sites and timings, aiding in conservation efforts in the Howe Sound, BC.
- Geberated a stream network analysis in ArcGIS Pro to assess salmon spawning habitat on Vancouver Island creating accessible and none accesable reaches in Chinook conservation areas on Vancouver Island B.C.
- Coral Reef Health Assessment: Conducted spatial analysis of coral reef data to evaluate ecosystem health and inform marine conservation strategies in the Indo-Pacific.
- Attended workshops on advanced GIS techniques and spatial data analysis.
- Participated in webinars on the latest trends in geomatics and environmental management.

## SKILLS

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- Proficient in GIS software: ArcGIS Pro, QGIS
- Programming languages: Python, R
- Spatial data analysis and manioulation
- Remote sensing and cartographic design
- Database management: SQL, Microsoft Access

## AWARDS

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- Benjamin A. Gilman International Scholarship
- IIE Generation Study Abroad Scholarship
- Dean's Honors List