

JOHIC MES

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SUMMARY

- Geomatics specialist with expertise in spatial modelling, remote sensing, and spatial data analysis, supporting environmental management and conservation efforts.
- Proficient in GIS software (ArcGIS, QGIS), Python, R, SQL, and JavaScript for geospatial analysis, database management, and data visualisation.
- Skilled in species distribution modelling and ecological suitability mapping to support conservation planning.
- Fluent in both English and French

EDUCATION

Master of Geomatics for Environmental Management

2024 - 2025

University of British Columbia - Department of Forestry

- Developed MaxEnt species distribution models integrating climate (ClimateBC), iNaturalist, and environmental covariates to evaluate future habitat suitability of culturally significant Musqueam plants.
- Conducted freshwater habitat analysis for Chinook salmon by deriving hydrology layers and stream networks from DEM and dam data to assess accessible streams and inform watershed connectivity restoration.

Bachelor of Applied Science, Computer Engineering

2015 - 2019

University of Ottawa, ON

- Built a strong foundation in programming, data structures, and systems design applicable to GIS, ecological modeling, and workflow automation.

WORK EXPERIENCE

Developer

05/2018 - Present

Public Health Agency of Canada - Ottawa, ON

- Prepare and process spatial data (layer adjustments, shapefile simplification, polygon binding, coordinate plotting) in QGIS as part of a web publishing pipeline.

- Develop interactive maps and spatial data visualisations of public health data using d3.js, ensuring accessibility compliance and effective data communication.
- Script automation workflows in Python, including a CSV-to-SQL pipeline and server tasks, to streamline data intake and management.
- Build APIs for project data using Flask and SQLite, ensuring reproducibility and accessibility of datasets.
- Coordinate multiple projects with epidemiologists and program teams to ensure efficient information dissemination of health data.
- Lead development of homepage redesign to simplify user interactions and wayfinding.
- Supervise and mentor students, assigning tasks, reviewing work, providing technical guidance and support.
- Co-Lead the summer student hiring process, from interviews to administrative requirements.

Firmware Developer

04/2020 - 03/2021

Rianta Solutions - Ottawa Ontario

- Debugged C++ drivers for high-speed Ethernet hardware and maintained documentation (Doxygen).

Software and Firmware Intern

06/2019 - 09/2019

Össur - Reykjavik, Iceland

- Develop firmware components for an embedded diagnostic application used for a microprocessor controlled knee prosthesis prototype.

VOLUNTEER WORK

Quarry Forest Restoration with Thousand Island National Park

- Assisted with forest restoration at Thousand Islands National Park, supporting tree planting and habitat regeneration.

TECHNICAL SKILLS

- **GIS & Remote Sensing:** ArcGIS Online, ENVI, Google Earth Engine
- **Programming & Data Analysis:**
 - Python (rasterio, pandas, numpy, geopandas, matplotlib, flask)
 - R (terra, sp, lidR)
 - Git, Jupyter, D3.js
- **Field/Survey Tools:** Drone Pilot Certificate (Basic Operations), Survey123