Peter Whitman

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Summary

Experienced data science researcher with expertise in remote sensing and geographic information science (GIS). Led high-performance computing projects at the U.S. Environmental Protection Agency focused on satellite-based water quality monitoring, which resulted in numerous peer-reviewed articles that influenced federal and state policy decisions. Received a M.Sc. in Geography from the University of British Columbia and a B.A. in GIS and Environmental Science from Carthage College. Skilled in Python, R, JavaScript, and ESRI ArcGIS, with a strong background working in hybrid teams on data science projects.

Experience

Freelance Consulting   **St. Paul, MN**
Data Science and GIS Consultant   11/2023 – Present
- Developed waterway navigation map for the 30,000 Islands Archipelago (Pointe au Baril, ON).

Sabbatical   **St. Paul, MN**
Personal Development   10/2022 – 10/2023
- Published three peer-reviewed articles based on previous work completed at the U.S. Environmental Protection Agency.
- Focused on physical & mental wellness.
- Hiked the Superior Hiking Trail (300+ miles).

U.S. Environmental Protection Agency   **Raleigh, NC**
Oak Ridge Institute of Science and Education Research Fellow   09/2019 – 09/2022
- Completed a competitive fellowship program and produced five peer-reviewed publications.
- Developed code bases in Python, JavaScript, and R to analyze terabytes of image and geospatial data using cloud and high-performance computing resources.
- Participated in NASA projects to evaluate water quality applications of the Geostationary Littoral Imaging and Monitoring Radiometer, PlanetScope constellation, and WorldView satellites.

University of British Columbia   **Vancouver, BC**
Graduate Research Assistant   05/2018 – 08/2019
- Conducted advanced spatial and aspatial analysis of population mortality in R.
- Mined, cleansed, and analyzed geospatial data to identify variables that influence cardiac arrest outcomes.
- Developed innovative image processing and photogrammetric techniques and developed machine learning algorithms in Python for image classification to better understand past landscapes using historical aerial photographs.

Graduate Teaching Assistant   09/2017 – 05/2019
- Taught 300+ students geographic information science and remote sensing.
- Provided comprehensive learning opportunities through live Python and ESRI ArcGIS demonstrations, labs, lectures, and individualized assistance.

Carthage College   **Kenosha, WI**
Undergraduate Teaching Assistant   09/2016 – 05/2017
- Taught 100+ students geographic information science.
- Engaged with students through live ESRI ArcGIS demonstrations and individualized assistance.

Student Manager   09/2016 – 05/2017
- Led a team of 15 students and provided mentorship to improve performance.
- Analyzed data and created reports to increase alumni donations through optimized engagement strategies.

City of Edina   **Edina, MN**
Geographic Information Systems Intern   06/2016 – 08/2016
- Used Python to automate individualized updates to flood zone maps for hundreds of homeowners.
- Managed and analyzed terabytes of geospatial data on department's shared database enterprise to support public works projects.

Minnesota Department of Natural Resources   **St. Paul, MN**
Invasive Species Program Intern   06/2015 – 09/2015
- Developed image classification algorithms to identify invasive species within aerial imagery of Minnesota.
- Conducted multi-day field campaigns to validate image classification algorithms.
- Created habitat suitability models to further refine results of image classification algorithms.

City of St. Paul   **St. Paul, MN**
Urban Forestry Intern   06/2014 – 08/2014
- Managed 3,000+ trees and identified suitable sites to plant new trees using ESRI ArcGIS products.

Education

University of British Columbia   **Vancouver, BC**
Master of Science, Geography   09/2017 – 08/2019
- Geography Department Outstanding Teaching Assistant Award

Carthage College   **Kenosha, WI**
Bachelor of Arts, Geographic Information Science and Environmental Science   09/2013 – 05/2017
- Geospatial Science Department Distinguished Senior Award
- Environmental Science Department Distinguished Senior Award
- Conducted wildlife biology research and took coursework in Chilean Patagonia with Round River Conservation Studies.

Skills

Languages	Technology Stack	Methods	Communication
• Python • R • MATLAB • JavaScript • SQL	• Unix Shell • VS Code • RStudio • MATLAB IDE • Google Earth Engine • GitHub • ESRI ArcGIS Products • ENVI/IDL • Agisoft Metashape • Adobe Photoshop • Adobe Illustrator • Google Workspace • Microsoft Office Suite	• Data Science • Statistics (Bayesian and frequentist) • Machine learning • Spatiotemporal statistics • Geospatial analysis • Object-based image analysis • Image processing and classification • Signal processing • Photogrammetry • Atmospheric correction • Satellite validation • Data visualization • Cartography	• Peer-reviewed publications • Technical reports • Public speaking • Technical demonstrations • Stakeholder engagement • Mentorship • Teaching • Teamwork and collaboration • AGILE development