Peter Whitman

St. Paul, MN | peterjosephwhitman@gmail.com | LinkedIn | Google Scholar | Personal Website

Summary

Experienced data scientist with more than four years of expertise developing machine learning models along with leveraging high-performance (HPC) and cloud computing resources to analyze spatial and temporal data for environmental monitoring. Strong background in technical writing and collaborating within hybrid teams across government, academia, and industry to deliver actionable data-driven solutions.

Experience

Planet Labs   **San Francisco, CA**
Solutions Engineer   03/2024 – Present
- Acted as a subject matter expert, engineering software solutions in Python that leveraged cloud computing resources and REST APIs to prepare, process, and analyze petabytes of satellite and geospatial data.
- Collaborated within an agile development team using GitLab, managing project requirements for contracts with government agencies, utilities, and agri-food companies totaling over $1 million.
- Established a standard operating procedure for automated detection of water quality anomalies through time series analysis of multispectral satellite data, increasing team efficiency on contracts.

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, authoring eight peer-reviewed publications that influenced state and federal policy decisions.
- Led collaborative projects with NASA, USGS, and NOAA to establish novel methods utilizing multispectral, hyperspectral, and synthetic aperture radar (SAR) data for satellite-based water quality monitoring.
- Developed scalable software and machine learning models in Python, JavaScript, and R, leveraging high-performance computing (HPC) resources to analyze terabytes of satellite and geospatial data.

University of British Columbia   **Vancouver, BC**
Graduate Research Assistant   05/2018 – 08/2019
- Pioneered an innovative workflow integrating photogrammetry, image processing, and machine learning in Python and MATLAB enabling unprecedented, automated analysis of historical airborne image data.
- Authored a grant proposal to secure $4,000 and performed analysis of structured and unstructured data using R and SQL to identify variables that influence cardiac arrest outcomes in British Columbia.

Graduate Teaching Assistant   09/2017 – 05/2019
- Instructed 300+ students in geographic information science (GIS) and remote sensing, delivering comprehensive learning experiences through live Python and ESRI ArcGIS demonstrations, labs, lectures, and individualized assistance.
- Recognized with the Geography Department's 'Outstanding Graduate Teaching Assistant Award' in 2019 for excellence in teaching and student engagement.

Education

University of British Columbia   **Vancouver, BC**
Master of Science, Geography   2019

Carthage College   **Kenosha, WI**
Bachelor of Arts, Geographic Information Science and Environmental Science   2017
- Geospatial Science Department 'Distinguished Senior Award'
- Environmental Science Department 'Distinguished Senior Award'

Skills

Programming Languages: Python (GDAL, SciPy, Scikit-learn, TensorFlow, Keras, Geopandas, Xarray, Matplotlib), R (ggplot2, raster, stats, caret, sp, sf, rgdal, spatstat), MATLAB, JavaScript, SQL, Unix/Linux shell

Technology Stack: Slurm, GitHub and GitLab, Visual Studio Code, Google Earth Engine, QGIS, ESRI ArcGIS, ENVI, Google Cloud Platform, Jira, Salesforce, Slack, Microsoft Office Suite, Google Workspace