

Regan Murray

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EDUCATION

University of Wisconsin, Madison

Bachelor of Arts, double major in Geographic Information Systems and Rhetorical Science

Madison, WI

Sep. 2016 – May 2020

Georgia Institute of Technology

Masters of Computer Science

Remote

Jan. 2024 - present

EXPERIENCE

GIS Analyst

San Francisco Estuary Institute

July 2022 – Present

Richmond, CA

- Train, apply, and test object-based Support Vector Machine and Random Forest machine learning algorithms in Python and JavaScript to remotely sense critical habitat locations across over 25,000,000 acres of land in California using LiDAR and imagery to support decision-making by Caltrans and the California State Water Resources Control Board
- Collaborate with cross-functional teams utilizing Jira and Git to efficiently manage Python and JavaScript software codebases, facilitating seamless version control, task tracking, and collaborative development efforts
- Serve as a liaison between technical staff, scientists, and stakeholders via technical documentation, reports, and presentations
- Employ project management training and principles to manage budgets, grant applications, technology, data, and talent for multi-year government contracts with the institute

GIS Analyst

Bureau of Land Management, Plant Conservation and Restoration Program

June 2020 – Present

Boise, ID

- Primary analyst on a national-level government business strategy for the Department of the Interior's (DOI) plant supply chain through automated data ingestion, analysis, and report generation which advised over \$13,700,000 of spending
- Developed supply chain tracking system using Python scripts which parsed 20+ years of historical government contract documents, facilitating data extraction, analysis, and eventually organization in a relational SQL database containing 20,000+ records
- Lead and managed creation, development, technology, and staff training on a project moving a \$5,000,000 annually funded nation-wide natural resource data collection program to digital format. Database infrastructure, technology, and training materials from this project have been used by 1,000+ DOI employees
- Utilized Adobe Creative Suite, Excel, Teams, and Sharepoint to collaborate and generate graphics, analyses, and reports on tight timelines

GIS Intern

Department of Atmospheric and Oceanic Sciences, PREFIRE

Dec. 2019 – May 2020

Madison, WI

- Developed IDL scripts to manually reproject data from 9 climate models of varying resolutions and projections
- Organized data, analyzed trends, and developed graphics for 250,000+ modelled climate predictions in Python using Matplotlib, Pandas, Geopandas, OGR, GDAL, etc.
- Collaborated remotely with a small team of researchers to produce meaningful analyses for academic audiences

Undergraduate Researcher

Gibbs Land Use and Environment Lab

Aug. 2019 – May 2020

Madison, WI

- Composed JavaScript in Google Earth Engine to perform temporal SVM analyses on Landsat 8 data
- Wrote Python and used ArcGIS to create a probability map of grazed land to understand grazing impacts
- Georeferenced, transformed, and combined diverse datasets to estimate acreage and temporal trends in land use

VOLUNTEER EXPERIENCE

Home Away From Homelessness | Aug. 2023 – present

- Tutor, chef, and chaperone for program supporting 25+ homeless children grades 6-12

TECHNICAL SKILLS

Software: ArcMap, ArcGIS Pro, Survey 123, Field Maps, ENVI, Google Earth Engine, Adobe Creative Suite, QGIS

Languages: Java, Python, Arcade, SQL (Postgres), JavaScript, HTML/CSS

Libraries: pandas, NumPy, Matplotlib, GDAL / OGR, selenium, geopy, osgeo, Leaflet, D3