William Gagne-Maynard

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PROFESSIONAL EXPERIENCE

Data Analyst — Mar. 2017 – Current

Geospatial Team, Institute for Health Metrics

- Analyzed geostatistical models for estimating vaccine coverage on a 5x5km grid scale to inform policy maker decisions.
- Collaboratively developed workflows using SQL and R to load and clean large datasets for input into our models.
- Created data visualization tools and dashboards using Python, R and ArcGIS for evaluating both model inputs and outputs.

Research Assistant — Sep. 2013 – Oct. 2016

School of Oceanography, University of Washington

- Cleaned, filtered and merged large geophysical datasets from multiple shareholders using Python and SQL.
- Generated maps and data visualizations for public dissemination as well as articles for scientific publication.
- Performed statistical analyses on environmental time series data using Python and R statistical packages.

Research Intern — Aug. 2012-Nov. 2012

Office of Groundwater – Branch of Geophysics, USGS

- Installed accelerometers and analyzed the correlation between stream discharge and seismic signals.
- Used Python and R to compile, analyze and display data from stream gauges and accelerometers as well as online USGS data.

Research Intern — Jun. 2012-Sep. 2012

College of Earth, Oceans and Environment, University of Delaware

- Developed R scripts to analyze salinity and nutrient time series data.
- Generated a 20-page report on nutrient cycling within the Murderkill estuary in Delaware.

EDUCATION

University of Washington, Seattle, WA

M.S. in Chemical Oceanography, Sep. 2013 – Oct. 2016
GPA: 3.6

- Certificate in Advanced Data Science
- Graduate level coursework: Database Systems, Data Visualization, Software Engineering for Data Scientists, Geospatial Analysis, Geospatial Statistics

Carleton College, Northfield, MN

B.A. Chemistry, June 2013. *Cum Laude*

- Coursework: Data Structures, Environmental Economics, Environmental Modeling

PROJECTS

Metagenome Explorer: http://borenstein-lab.github.io/burrito/

Developed an interactive visualization using D3.js and JavaScript for the exploration of metagenomic data sets. This tool allows researchers to interactively explore nested data and the relationships between them.

eRivers: *https://github.com/wgagne-maynard/eRivers*

Created a Python toolkit for reproducible data cleaning, analysis, and visualization of high-resolution and high-dimensional aquatic time series data. This tool allows researchers to input their own data and parameters and move beyond the spreadsheet model for analyzing these growing datasets.

PROGRAMMING AND SOFTWARE EXPERIENCE

Python – 5 years (numpy / Pandas / scikit-learn)

R - 4 years (data.table / shiny / leaflet)

ArcGIS – 4 years (mapping / spatial statistics)

SQL – 3 years (PostgreSQL / database querying)

Git – 3 years (version control / remote collaboration)

Unix – 2 years (shell scripts)

Tableau – 2 years (data visualization)