Andrew Gaidus

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Education

Yale University, School of Forestry & Environmental Studies, New Haven, CT
Master of Environmental Management (MEM), 2013
- *Concentration:* Quantitative Policy Analysis
- *Relevant Coursework:* Spatial Statistics, Regression Modeling, Econometrics, Advanced Microeconomics, Energy Economics, Resource Economics, Vector GIS, Raster GIS, Python Scripting for GIS, Spatial Databases

Williams College, Williamstown, MA
Bachelor of Arts in Environmental Policy, Cum Laude, 2011
- *Relevant Coursework:* Microeconomics, Macroeconomics, Natural Resource Economics, GIS and Remote Sensing, Multivariable Calculus

Experience

Pacific Institute for Research and Evaluation, Oakland, CA   October 2013 – Present
Research Associate
- Serve as in-house data scientist and spatial data analyst at a national non-profit public health research institute where I conduct spatial and statistical analysis for the organization's research
- Manage large, complex, hierarchical, spatial data systems using open-source data analysis, GIS, and statistical tools (Pandas, NumPy, SciPy, GDAL/OGR, Shapely, Fiona, GeoPandas, PySAL, PostgreSQL / PostGIS)
- Build spatial econometric models that account for spatially structured relationships and misalignments to measure patterns in and correlates with various problematic public health outcomes
- Work with teams of researchers on project development and ensuring the quantitative analyses meet their goals: conceptualizing research questions based on available data, developing an analytical strategy that addresses these specific questions, and interpreting the results of the analyses
- Author methods and results sections for peer reviewed published papers (https://www.researchgate.net/profile/Andrew_Gaidus)

Boundary Solutions, Mill Valley, CA   July 2013 – October 2013
Data Manager & GIS Analyst
- Managed and compiled geospatial parcel boundary data, tax roll data, and other real estate data collected from over 1,100 counties across the U.S.
- Used Python to clean raw data in order to provide clients with normalized data from differing sources.

Yale School Forests, Yale University, New Haven, CT   June 2012 – August 2013
Data Manager & GIS Analyst
- Built and managed spatial databases containing GIS Data for 10,800 acres of forestland in 7 discrete forests owned by Yale University
- Updated stand boundaries, calculated tree species inventories, and created forest management maps used for locating and planning timber sales

The Nature Conservancy, Boston, MA   June 2012 – August 2012
GIS and Conservation Science Intern
- Worked in the Nature Conservancy's Eastern Conservation Science division to build, manage, and analyze spatial ecological datasets to help land trusts prioritize conservation efforts
- Built and analyzed raster datasets as part of a large-scale mapping project that used a random forest classification model to predict terrestrial habitat type

Continuing Education

John's Hopkins University, Coursera, Data Science Specialization January 2015 – May 2016
- *Coursework:* The Data Scientist's Toolbox, R Programming, Getting and Cleaning Data, Exploratory Data Analysis, Reproducible Research, Statistical Inference, Regression Models, Practical Machine Learning, Developing Data Products, Data Science Capstone
- *Certificate:* https://www.coursera.org/account/accomplishments/specialization/SSWXB67MQHFJ

University of California, Berkeley, Geospatial Innovation Facility May 2015
Spatial Data Science Bootcamp
- Three-day intensive workshop covering spatial databases (PostgreSQL / PostGIS); open-source tools for spatial data analysis (Python, R); and web-mapping (Leaflet, D3)

Technical Skills

- **Programming:** Python (NumPy, SciPy, Pandas, matplotlib, StatsModels, PySAL, Shapely, Fiona, GeoPandas, GDAL / OGR), R (ggplot2, knitr, caret, RWeka, tm, dplyr)
- **Software:** PostgreSQL / PostGIS, ArcGIS, QGIS, WinBUGS, Stata, QGIS
- **Statistical Methods:** spatial regression, Bayesian spatial models, time series, multi-level models, random forests, principal component analysis

Conference Presentations

- Andrew Gaidus, Sharon Lipperman-Kreda, Bridget Freisthler, Christopher Morrison, Paul J. Gruenewald, "Spatial Agglomerative Processes and the Economic Geography of Commercial Drug Markets", Association of American Geographers Annual Meeting, San Francisco, CA, March 29, 2016.