

Andy Pickering, PhD

Data Scientist

Golden, CO

andypicke@gmail.com

[Data Science Blog](#)

GitHub /andypicke

LinkedIn /andypicke

TECHNICAL SKILLS

Expert: SQL, R, RStudio, Matlab

Intermediate: Python

Python: Pandas, NumPy, SciPy Stats, Matplotlib, Seaborn, Scikit-Learn, Keras

R: RStudio, dplyr, ggplot2, plotly, leaflet, Shiny, R-Markdown

Data science: Statistics, machine learning, regression models, decision trees, random forest

Other : SQL, Git, Github, SVN, VScode, Docker, JIRA, AWS, Agile

PROFESSIONAL EXPERIENCE

Data Scientist & Data Analytics Supervisor - ICF

Sep 2017 - Oct 2019

- Analyzed customers' home energy usage with R and SQL to create home energy reports and drive messaging for energy efficiency and rebate programs for power utilities.
- Delivered relevant offers and recommendations to customers for reducing energy usage and upgrading equipment, based on modeling of their heating and cooling energy usage.
- Analyzed smart thermostat and weather data to provide customized recommendations for saving energy.

Postdoctoral Research Associate - Oregon State University

2015 - 2017

- Developed data-processing pipeline and analysis for turbulence measurements made by novel instruments during standard shipboard sampling, with the goal of greatly increasing our understanding of turbulent mixing across the global oceans.
- Analyzed data from autonomous research vessel operating in coastal and open-ocean waters.

Graduate Research Assistant - University of Washington

2008 - 2014

- Analyzed time series and spatial data from a variety of instrument platforms and models.
- Applied time-series analysis techniques including spectral analysis and harmonic fitting to time series of oceanographic data (temperature, salinity, velocity) in order to isolate and study waves generated by different tidal frequencies.
- Used harmonic-fit techniques on velocity measured by multiple shipboard transects to extract the spatial structure of internal tide beams generated by tidal flow over the Hawaiian Ridge.
- Communicated results through peer-reviewed journals and presentations at scientific conferences.

PROJECTS

[Predicting JeffCo Open Space Parking](#) | Python, Pandas, Matplotlib, SciKit-Learn

- Analyzed [LotSpot](#) parking data and weather data to identify usage trends and predict the number of spaces available at popular trailheads.
- Built a random-forest regression model with R^2 of 0.64. The most important predictors were temperature and UV index.

[Journalists Under Fire](#) | Python, Pandas, Matplotlib, Folium

- Analyzed journalist deaths and imprisonments since 1992 to identify global trends in threats to journalists and the free press.
- Found majority of deaths were local journalists covering politics and war during armed conflicts, while imprisonments were largely related to coverage of political and human rights issues.

EDUCATION

Galvanize Data Science Immersive | Denver, CO

Mar-June 2020

12-Week intensive Python-based curriculum covering best practices in machine learning, statistical analysis, natural language processing, and data visualization..

MS & PhD Physical Oceanography | University of Washington, Seattle WA

2008 - Dec 2014

PhD thesis: *Investigation of the Spatial and Temporal Structure of Internal Waves*

MS thesis: *Near-Inertial Waves Observed During the Internal Waves Across the Pacific Experiment*

BS Physics & Geology | Northeastern University, Boston MA

2003 - June 2008