Chris Walter

Data Scientist

Objective

Data scientist seeking to apply 13 years of experience in experimental design and analysis toward solving problems as part of a team

Contact

cwalte12@mail.wvu.edu

chriswalter.info

Skills

Statistical analysis

Spatial analysis

Data wrangling & management

R | Tableau | Python | SQL

ArcGIS | rgdal | Idrisi

Ecological theory

Project management

Report writing

Collaborative work

Education

M.S. Candidate, Analytics
Georgia Institute of Technology

Ph.D. Biology
West Virginia University

B.S. Environmental Studies
Shepherd University

Experience

Post-Doctoral Researcher

West Virginia University | *January 2020 – present*

- Built empirical ecosystem models to track the flow of carbon and nitrogen through plant, soil, and microbial pools
- Managed an inter-agency grant proposal writing team
- Collaborated with an international team of researchers to produce cutting-edge ecosystem research

University of Minnesota | *September 2016 – January 2020*

- Led a continental-scale ecological research study, collecting and analyzing data with collaborators based in multiple National Labs
- Used new and existing data to gain new insight into carbon storage in American grasslands using multiple statistical methods
- Completed reports, managed budget and 10+ people

Research Assistant

West Virginia University | *August 2011 – September 2016*

- Developed novel algorithmic statistical analyses to determine the effect of atmospheric nitrogen deposition on plant communities
- Co-authored nine papers while working with a group of scientists, land managers, and forest rangers

Spatial Analyst

Montana DNRC | *February 2010 – August 2011*

- Designed a spatial database for statewide forest resources using archive and historical right-of-way data
- Used the database to design a statewide habitat management and resource-use plan for Montana Trust Lands

United States Geological Survey | *January 2007 – August 2009*

- Collected, organized, and analyzed a continental-scale plant dataset from herbaria and archives for use in habitat suitability models
- Built and tested habitat models for a rare forest plant using maximum entropy-based statistical models

Statistical Approaches

Regression: Linear, non-linear, and mixed models

Groups: ANOVA, ANCOVA, and PERMANOVA

Spatial: Kriging and interpolation, map algebra, and vector analysis

Clustering: PCA and NMDS

Publications

Walter, C. A., Adams, M. B., Gilliam, F. S., and Peterjohn, W. T. (2017) Non-random species loss in a forest herbaceous layer following nitrogen addition. *Ecology* 98: 2322-2332

Gilliam, F. S., Walter, C. A., Peterjohn, W. T., and Adams, M. B. (2018) Nitrogen dynamics in mineral soil of a central Appalachian hardwood forest during a quarter century of whole-watershed nitrogen additions. *Ecosystems* 21: 1489-1504

Smith, D. R., Lei, Y., Walter, C. A., and Young, J. A. (2012) Incorporating predicted species distribution in adaptive and conventional sampling designs. In R. A. Gitzen, J. J. Milspaugh, A. B. Cooper, D. S. Licht (Eds.), *Design and Analysis of Long-Term Ecological Monitoring Studies* (pp. 381-396). New York, NY. Cambridge University Press

For analysis examples and a complete list of experience and publications, please visit **chriswalter.info**