

GRAYSON WHITE

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EDUCATION

Bachelor of Arts | **Reed College** | *Portland, Oregon*

August 2017 – May 2021

- Major in mathematics with a concentration in statistics
- Thesis: *A Hierarchical Bayesian Approach to Small Area Estimation of Forest Attributes*
- Relevant Coursework: Real Analysis, Mathematical Statistics, Probability, Machine Learning, Data Science, Number Theory, Abstract Algebra, Vector Calculus, Linear Algebra, Discrete Structures, Econometrics, Environmental Economics & Policy, Economics of Discrimination

EXPERIENCE

Industry

Data Scientist | **U.S. Forest Service: FIA Branch Contractor**

July 2021 – Present

- Full-time Data Scientist role at the U.S. Forest Service. Primary projects include development of the *FIESTA* R package, small area estimation research, and small area estimation dashboard development.

Research

Statistician and Research Assistant | **Reed College Forestry Data Science Lab**

Summer 2021

- Prepared and submitted manuscript titled *Hierarchical Bayesian Small Area Estimation using Weakly Informative Priors in Ecologically Homogeneous Areas of the Interior Western Forests to Frontiers in Forests and Global Change*.
- Began development of open-source software for hierarchical Bayesian small area estimation.

Thesis Student | **Professor Kelly McConville** | **Reed College**

August 2020 – May 2021

- Year-long senior thesis project implementing hierarchical Bayesian models for small area estimation.
- Work with researchers at the Forest Inventory and Analysis Program to create useful models for industry application.

Data Science for the Public Good Researcher | **Oregon State University**

June 2020 – August 2020

- Developed forecasting tools for cost analysis of water and wastewater facilities in Oregon small towns and cities using Bayesian methods. Provided city planners with data-driven solutions such as an interactive dashboard for planning long-term developments and investments.

Teaching

Course Assistant | **Reed College Mathematics Department** | *Portland, Oregon*

- MATH 241: Data Science
- MATH 141: Introduction to Probability and Statistics

Spring 2021

Fall 2020

Tutor | **Reed College Mathematics Department** | *Portland, Oregon*

- MATH 392: Mathematical Statistics

Spring 2021

- MATH 241: Data Science *Fall 2020 – Spring 2021*
 - MATH 141: Introduction to Probability and Statistics *Spring 2020*
- Tutor | Reed College Economics Department | Portland, Oregon*
- ECON 311: Survey of Econometric Methods *Fall 2020 – Spring 2021*

STATISTICAL SOFTWARE: R PACKAGES

White G. 2020. *ggglm*: Grammar of Graphics for Linear Model Diagnostic Plots. Official *ggplot2* extension.

White G, Mobley B. 2020. *trimetStops*: Data Package for all of the TriMet Stops in the Portland Metro Area.

PRESENTATIONS

Bayesian Cost Modeling of Wastewater Facilities | Talk | Reed College Empirical Research Workshop Series

Online | August 2020

Bayesian Cost Modeling of Wastewater Facilities | Poster Session | Data Science for the Public Good Symposium

Online | August 2020

SKILLS

Technologies

- R (advanced)
- Git, GitHub, LaTeX, markdown (intermediate)
- Python, Stata (basic)

Statistical Analysis

- Bayesian methods and analysis. Advanced statistical modeling and learning methods. Applications to environmental problems and econometrics.

Data Visualization

- Using *tidyverse* data visualization packages. Skills include interactive data visualizations and creating interactive dashboard applications in *shiny*.

PROJECTS

Political Party Affiliation Prediction | Paper | github.com/graysonwhite/model-stacking-paper

- Research paper utilizing advanced machine learning techniques to predict political affiliation based on a variety of social, economic, and other factors.

Baseball VisualizeR | R shiny dashboard | graysonwhite.shinyapps.io/baseball-visualizeR

- Created as a final project for Math 241: Data Science. This project uses advanced data visualization and data acquisition techniques to allow for insightful visualizations to be seen and interacted with from the user end of the *shiny* application.

Wastewater Treatment in Oregon | R shiny dashboard | graysonwhite.shinyapps.io/oregon-wwtps/

- Created as a researcher for Data Science for the Public Good at Oregon State University in Summer 2020. Allows for stakeholders to use interactive data visualizations and a cost modeling tool to better understand wastewater treatment in rural Oregon towns and cities.

PROFESSIONAL AFFILIATIONS

Member, Secretary | **Reed College Student Chapter of the American Statistical Association**

Portland, Oregon | *January 2020 – Present*

- Work with other members and faculty to create an inclusive environment in the statistics community at Reed College
- Organize events, help recruit new members.

Member | **American Statistical Association**

United States | *January 2020 – Present*