GRAYSON W. WHITE

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EDUCATION

Ph.D. Statistics and Forestry, *Michigan State University,* East Lansing, MI. *2022 – Present*

- Dual major doctoral degree. All course requirements met from both departments.

B.A. Mathematics with a Concentration in Statistics, *Reed College,* Portland, OR. *2017 – 2021*

- Thesis: *A Hierarchical Bayesian Approach to Small Area Estimation of Forest Attributes*

PUBLICATIONS

Wieczorek J., McConville K., White G., Frescino T., and Moisen G. (In preparation). *Assessing the performance and statistical properties of small area estimators for forest inventory.*

Frescino T., Moisen G., Patterson P., Toney C., and White G. (In review). *FIESTA: A Forest Inventory Estimation and Analysis R Package.* Ecography.

Frescino T., McConville K., White G., Toney C., and Moisen G. (2022). *Small Area Estimates for National Applications: A Database to Dashboard Strategy Using FIESTA*. Frontiers in Forests and Global Change.

White G., McConville K., Moisen G., and Frescino T. (2021). *Hierarchical Bayesian Small Area Estimation Using Weakly Informative Priors in Ecologically Homogeneous Areas of Interior Western Forests*. Frontiers in Forests and Global Change.

EXPERIENCE

Research Positions

Undergraduate Researcher Mentor, *Harvard University*, Cambridge, MA. *Summer 2022*

- Mentor for undergraduate researchers in the Undergraduate Forestry Data Science Lab at Harvard University.

Data Scientist, *USDA Forest Service*, Ogden, UT. *July 2021 – May 2022*

- Full-time position contracting with the U.S. Forest Service Forest Inventory and Analysis Program. Primary projects include development of the *FIESTA* R package, small area estimation research, model-assisted estimation research, and R *shiny* dashboard development.

Research Fellow, *Reed College Forestry Data Science Lab*, Portland, OR. *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 an open-source R software package and *tidymodels* extension for flexible small area estimation, including development to include hierarchical Bayesian models.

Research Fellow, *Data Science for the Public Good,* Oregon State University. *Summer 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.

Education Positions

Data Science Educator, *RStudio PBC*, Remote. *January 2022 – June 2022*

- Write instructional materials and develop content for R users including tutorials, code recipes, practice exercises, datasets, and large-scale data science projects.
- Lead and mentor groups of adult learners through data science projects as they complete apprenticeships with R.

Course Assistant, *Reed College*, Portland, OR. *August 2020 – May 2021*

- Courses: *Mathematics 241: Data Science, Mathematics 141: Intro to Probability and Statistics.*
- Held office hours, attended and contributed to lectures.

Course Tutor, *Reed College*, Portland, OR. *January 2020 – May 2021*

- Courses: *Mathematics 392: Mathematical* Statistics, Mathematics *241: Data Science, Mathematics 141: Intro to Probability and Statistics, Economics 311: Survey of Econometric Methods.*
- Held both individual tutoring sessions and bi-weekly drop-in tutoring sessions.

PRESENTATIONS

Conferences, invited

Small Area Estimation in Forestry Inventory, discussant, SAE 2022: Small Area Estimation, Surveys and Data Science, University of Maryland, College Park, MD, May 2022.

Conferences, contributed

Hierarchical Bayesian Small Area Estimation Using Weakly Informative Priors in the Interior Western United States, SAE 2022: Small Area Estimation, Surveys and Data Science, University of Maryland, College Park, MD, May 2022.

Other

A Hierarchical Bayesian Approach to Small Area Estimation of Forest Attributes, Reed College undergraduate thesis orals defense, Reed College, Virtual. May 2021.

Hierarchical Bayesian Small Area Estimation of Forest Attributes, Reed College Mathematics Colloquium, Virtual. January 2021.

Bayesian Cost Modeling of Wastewater Facilities, Reed College Empirical Research Workshop Series, Virtual. August 2020.

Bayesian Cost Modeling of Wastewater Facilities, Oregon State University Data Science for the Public Good Symposium, Virtual. August 2020.

SCIENTIFIC SOFTWARE: R PACKAGES

Frescino T., Moisen G., Patterson P., Toney C., White G. 2022. *FIESTA:* Forest Inventory Estimation and Analysis. Maintainer.

Frescino T., Toney C., White G. 2022. *FIESTAutils:* Utility Functions for Forest Inventory Estimation and Analysis. Maintainer.

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

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

TECHNICAL SKILLS

- R, GitHub & Git, markdown (advanced)
- Python, LaTeX, Unix shell (intermediate)
- Stata, GIS (basic)

PROFESSIONAL AFFILIATIONS

*Member (*since 2020), American Statistical Association

Member (since 2022), International Society for Bayesian Analysis