Jared Greathouse

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https://jgreathouse9.github.io/

Work Experience

Industry

Data Science Intern, May 23 2023-August 11 2023, Gainwell Technologies

Supervised by Andrew Wheeler, I developed basic skills in GitHub, SQL, and Scrum/Agile framework. I demonstrated how k-means clustering and functional PCA can group metropolitan statistical areas that were similar on number of insurance claims filed over time, using data from their Databricks system.

Academic, Georgia State University

PHD Research Assistant in Public Policy, 2022-(Advised by: Jason Coupet)

PHD Research Assistant in Public Policy, 2021 (Greg Lewis)

Graduate Research Assistant, 2020, (Eric L. Sevigny)

Undergraduate Research Assistant, 2017-2019, (Eric L. Sevigny)

Education

PHD

Public Policy, Fall 2021-(Expected Spring 2026) , Advisor: Jason Coupet

Masters Degree

Political Science, Fall 2019-Spring 2021, Advisor: Eric L. Sevigny

- Masters Thesis: "¿Qué diferencia? Application of Difference-in-Differences to Mexico's Drug War" https://tinyurl.com/ygp2tfu7

Bachelors

Political Science, Fall 2015-Spring 2019, Advisor: Eric L. Sevigny

Research Interests

Causal Inference (Relevant Courses: Causal Inference (Masters, Econ and Public Policy, Georgia State), PHD Program Evaluation (Policy, Georgia State)

Applied Econometrics (Relevant Courses: Political Science- Intro, OLS, GLMs Policy: Logit, Georgia State).

Other

Languages Spoken: English (Native), Spanish (Intermediate)

Programming Languages: Stata (Professional), Python (Intermediate), R, SQL (Basic)

Skills: Agile (Scrum)

Software

mlsynth (Under development) – This Python library implements: *Synthetic Control Method* (Abadie, A., Diamond, A., & Hainmueller, J., Synthetic control methods for comparative case studies), *Principal Component Regression* (Agarwal, A., Shah, D., Shen, D., & Song, D., On robustness of principal component regression), *Modified Synthetic Controls* (Li, K. T., Statistical inference for average treatment effects estimated by synthetic control methods), *Factor Model Approach* (Li, K. T., & Sonnier, G. P., Statistical Inference for the Factor Model Approach to Estimate Causal Effects in Quasi-Experimental Settings), *Robust PCA Synthetic Control* (Mani Bayani), *Forward HCW*, (Shi, Z., & Huang, J., Forward-selected panel data approach for program evaluation), *Forward Difference-in-Differences*, (Li, K. T., A simple forward difference-in-differences method), *Two Step Synthetic Control Method*, (Li, Shankar, A Two-Step Synthetic Control Approach for Estimating Causal Effects of Marketing Events).

For a tutorial of mlsynth (under development), see: https://github.com/jgreathouse9/mlsynth

RSL – This Python class implements the Robust Synthetic Learner (part of the above **mlsynth**). It model averages the causal predictions of Forward DID and the Robust PCA SCM estimator.

SCUL – This Stata command implements synthetic control estimation using LASSO and time-series cross-validation. Available on **ssc** (this project is dormant and is no longer being updated)

Referee Experience

Stata Journal (1) Journal of Policy Analysis and Management (1)

Publications

Refereed Works

Sevigny, Eric L., Greathouse, Jared A. & Medhin, Danye N. (2023). Health, safety, and socioeconomic impacts of cannabis liberalization laws: An evidence and gap map. Campbell Systematic Reviews, 19(4), e1362. https://doi.org/https://doi.org/10.1002/cl2.1362

Sevigny, Eric. L., Pacula, Rosalie L., Aloe, Ariel M., Medhin, Danye N., & Greathouse, Jared A. (2021). Protocol: The effects of cannabis liberalization laws on health, safety, and socioeconomic outcomes: An evidence and gap map. Campbell Systematic Reviews, 17(1), e1137. https://doi.org/10.1002/cl2.1137

Eric L. Sevigny and Jared A. Greathouse. Replication of a research claim from Weidmann and Callen (2013), from British Journal of Political Science. (2020). Written for the U.S. Department of Defense's Systematizing Confidence in Open Research and Evidence (SCORE)

Non-Refereed Works

Greathouse, Jared A., Bayani, Mani, & Coupet, Jason, Splash! Robustifying Donor Pools for Policy Studies (presented at the Association of Public Policy Analysis and Management, 2023)

Sevigny, Eric L., Johnson, Thaddeus L., Greathouse, Jared A. Predicting Recidivism Fairly: A Machine Learning Application Using Contextual and Individual Data. Final Report for the NIJ Recidivism Forecasting Challenge, 2021

Greathouse, Jared A. "Scalpel. . . Hammer. . . Causal analysis of leadership removal and military interventions in Mexico's Drug War." Georgia State Undergraduate Research Conference, April 2019

Sevigny, Eric L., and Jared A. Greathouse. "The Effect of Mexico's Kingpin Strategy on Drug-Related Violence: A Systematic Review and Meta-Analysis." International Society for the Study of Drug Policy, May 2018.

Works in Progress

Greathouse, Jared A., Bayani, Mani, & Coupet, Jason, Splash! Robustifying Donor Pools for Policy Studies (In Preparation)

Jared A. Greathouse. "Music To My Ears: Ensembling Synthetic Controls and Difference-in-Differences."

Dormant Publications

These projects are no longer being worked on.

Scul: Regularized Synthetic Controls in Stata (RR from Stata Journal).