Beniamino Green

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Social data scientist passionate about quantitative research and numerical methods. Skilled at using Python, R and Rust for quantitative social science research and for developing statistical software.

Education

2021-2022	Masters in Social Analysis and Research *Brown University* 4.0 GPA
2018-2021	B.Sc. Philosophy, Politics and Economics *University College London* Program of study: Politics and Philosophy with Data Science First Class Honors

Professional Expeience

2022-2024	Pre-Doctoral Fellow *Yale University* Applying and developing new methods at the intersection of Machine Learning and Causal Inference, with special attention to applications to Medicaid plan management.

Other Academic Experience

Spring 2022	Teaching Assistant, Multivariate Statistics II (Graduate Level) *Sociology Department, Brown University* Developed materials for and led weekly labs on regression techniques including GLMs and discrete choice models.
2021-2022	Research Assistant Work *University College London, Indiana State University* Conducted analysis on survey experiment data investigating whether survey respondents are more likely to endorse an act of political violence which aligns with their ideological predispositions. Analyzed data from survey experiments to understand how veterans' commanding officers' leadership styles impacted unit behavior when deployed.

Publications and Working Papers

Publications:

– Beniamino Green. "Zoomerjoin: Superlatively-Fast Fuzzy Joins". In: *Journal of Open Source Software* 8.89 (2023), p. 5693. DOI: 10.21105/joss.05693. URL: https://doi.org/10.21105/joss.05693

Working Papers:

– "Why Can't We Be Friends? Untangling Conjoined Polarization in America" (with Julie Norman)

– "Who Does Managed Care Work For?" (with Jacob Wallace, Austin Denteh, and Helge Liebert)

– "Financial Health Among Louisiana Medicaid Enrollees" (with Chris Frenier, Brig Walker, Jacob Wallace, Ander Siebert, Andrew Anderson, Kevin Callison, and Chima Ndumele)

– "The effects of adverse health events on financial health: Evidence from linked Medicaid-credit report data" (with Chris Frenier, Brig Walker, Jacob Wallace, Ander Siebert, Andrew Anderson, Kevin Callison, and Chima Ndumele)

– "Excess Death Rates for Republican and Democratic Registered Voters During the COVID-19 Pandemic" (with Jacob Wallace, Paul Goldsmith-Pinkham, and Jason Schwartz)

Relevant Methods Training

PHP2530: Bayesian Statistics — Training in Bayesian statistics with an emphasis on numerical approaches, including coverage of the EM algorithm, Gibbs sampling, MCMC, and importance sampling.

APMA1460: Introduction to Computational Linear Algebra — Fundamental algorithms in computational linear algebra with special focus on numerical stability.

POLS0012: Causal Methods — Observational designs (regression, matching), quasi-experimental methods (instrumental variables, and regression discontinuity designs), and panel-data methods (difference in differences, synthetic control methods).

APMA1420: Recent Applications of Probability and Statistics — Maximum entropy principle for systems and large deviations, bias-variance dilemma in nonparametric inference, and computational methods for estimating graphical models.

CSCI1420: Machine Learning — Tree methods, boosting approaches, naive bayes, SVM's and neural networks.

POLS0013: Measurement in Political Science — Foundational measurement and dimension-reduction methods in the social sciences, including PCA, EFA, and item response methods.

SOC2240: Event History Methods — Modeling for time-until-event problems, including Kaplan-Meier product-limit estimates, discrete-time logit models, and Cox proportional-hazards regression models.

POLS0010: Data Analysis — Data analysis and statistics in R, with special emphasis on regression models (logit regression, hierarchical models, MRP), and text analysis.

PHP2550: Applied Data Analysis — Simulation methods, bias-variance dilemma with a focus on regularized regression methods.

Skills

Programming Languages — R, Python, Rust, Unix Shell / Bash, MC-STAN

Markup Languages — LaTeX, Sweave, R-Markdown, HTML, CSS, Markdown, Groff

Prototyping — Familiar with Arduino, Jetson Nano and Raspberry-pi architectures for development

Frameworks and Tools — Git, Linux, Vi/Vim, Office Suite, Heroku CLI, Travis-CI, Fusion 360