Cory McCartan

Curriculum Vitae

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CONTACT INFORMATION

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EDUCATION

Harvard University 2019 –
Ph.D. in Statistics, expected May 2023. Advisor: Kosuke Imai.
A.M. in Statistics, March 2021.

Grinnell College 2015 – 2019
B.A. in Mathematics, with honors.

PUBLICATIONS

"Recalibration Of Predicted Probabilities Using the 'Logit Shift': Why does it work, and when can it be expected to work well?" with Evan T. R. Rosenman and Santiago Olivella. *Political Analysis*, Forthcoming.

"The use of differential privacy for census data and its impact on redistricting: The case of the 2020 U.S. Census," with Christopher T. Kenny, Shiro Kuriwaki, Tyler Simko, Evan T. R. Rosenman, and Kosuke Imai. *Science Advances* 7:41 (2021).

"Geodesic Interpolation on Sierpinski Gaskets," with Caitlin M. Davis, Laura A. LeGare, and Luke G. Rogers. *Journal of Fractal Geometry* 8:2 (2021).

WORKING PAPERS

"Measuring and Modeling Neighborhoods," with Jacob R. Brown and Kosuke Imai.

"Sequential Monte Carlo for Sampling Balanced and Compact Redistricting Plans," with Kosuke Imai. Under Review.

WORKS IN PROGRESS

"Individual and Differential Harm in Redistricting," with Christopher T. Kenny

"Estimation of Racial Disparities When Race is Not Observed," with Kosuke Imai, Daniel E. Ho, and Jacob Goldin.

"Simulated redistricting plans for the analysis and evaluation of redistricting plans in the United States," with Christopher Kenny, Tyler Simko, Shiro Kuriwaki, George Garcia III, Kevin Wang, Melissa Wu, and Kosuke Imai.

"Two-stage Experiments and Stochastic Intervention," with Shusei Eshima and Kosuke Imai.

OTHER WRITING

"Who's the most electable Democrat? It might be Warren or Buttigieg, not Biden." *The Washington Post* (October 23, 2019).

"I-405 Express Toll Lanes: Usage, benefits, and equity," with Shirley Leung, C.J. Robinson, Kiana Roshan Zamir, Vaughn Iverson, and Mark Hallenbeck. Technical report for the Washington State Department of Transportation (2019).

Software

`redist`: Simulation Methods for Legislative Redistricting

`redistmetrics`: Redistricting Metrics

`easycensus`: Quickly Extract and Marginalize U.S. Census Tables

`PL94171`: Tabulate P.L. 94-171 Redistricting Data Summary Files

`adjustr`: Stan Model Adjustments and Sensitivity Analyses using Importance Sampling

`conformalbayes`: Jackknife(+) Predictive Intervals for Bayesian Models

`alarmdata`: Download, Merge, and Process Redistricting Data

`blockpop`: Estimate Census Block Populations for 2020

`wacolors`: Colorblind-friendly Palettes from Washington State

Presentations

Teaching

Harvard University

STAT 221: Monte Carlo Methods & Other Computational Tools for Statistical Learning	Fall 2020
STAT 117: Introduction to Biostatistics	Spring 2021

Grinnell College

MAT 215: Linear Algebra	Fall 2017 and Spring 2019
MAT 310: Statistical Modeling	Fall 2018
Grinnell College Math Lab	

Service

Work Experience