Cory McCartan

Curriculum Vitae

June 2022

CONTACT INFORMATION

Department of Statistics, Harvard University 1 Oxford St, Ste 400 Cambridge, MA 02138 (425) 770-9244 cmccartan@fas.harvard.edu corymccartan.com

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 Joint Statistical Meetings, Invited Paper Panel: 2021, 2022.

> Society for Political Methodology, Annual Meeting, Paper: 2021, 2022; Poster: 2021, 2022.

> American Association for Public Opinion Research, Annual Meeting, Poster: 2022.

> Institute for Quantitative Social Science, Harvard University, Applied Statistics Workshop, Paper: 2020, 2021.

TEACHING Harvard University

> STAT 117: Introduction to Biostatistics Spring 2021

Awarded a Certificate of Distinction in Teaching

STAT 221: Monte Carlo Methods & Other Computational Fall 2020 Tools for Statistical Learning

Grinnell College

MAT 215: Linear Algebra Fall 2017 and Spring 2019 MAT 310: Statistical Modeling Fall 2018

Grinnell College Math Lab 2018 - 2019

SERVICE Harvard Statistics Graduate Council 2020 -

Organized Ph.D. student retreat and research "lightning talks," 2020 and 2021.

2019 - 2021

Harvard Graduate Students Union – UAW Local 5118 Elected member, Bargaining Committee, 2020–2021 and 2021–2024 contracts. Interim chair, Finance and Benefits Committee, 2020.

Reviewer: Sloan Foundation.

Membership American Statistical Association, Society for Political Methodology, American As-

sociation for Public Opinion Research.

WORK University of Washington eScience Institute Summer 2019

EXPERIENCE Data Science for Social Good Fellow

University of Connecticut Summer 2018

REU Participant, Department of Mathematics

Fred Hutchinson Cancer Research Center Summer 2017

Lead Intern, Department of Biostatistics

Grinnell College Department of Mathematics 2017

Course Grader

Cray, Inc. Summer 2015

Intern, Chapel Language Testing