

Cory McCartan

Curriculum Vitae

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

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

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. <i>Political Analysis</i> , Conditionally accepted.	
	“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. <i>Science Advances</i> 7:41 (2021).	
	“Geodesic Interpolation on Sierpinski Gaskets,” with Caitlin M. Davis, Laura A. LeGare, and Luke G. Rogers. <i>Journal of Fractal Geometry</i> 8:2 (2021).	

WORKING PAPERS	“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.	
	“Measuring and Modeling Neighborhoods,” with Jacob R. Brown and Kosuke Imai. Under Review.	
	“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 Robin Fisher, Daniel E. Ho, Jacob Goldin, and Kosuke Imai.	
	“Two-stage Experiments and Stochastic Intervention,” with Shusei Eshima and Kosuke Imai.	
	“Regression of the Conditional Median,” with Xiao-Li Meng.	

“Algorithm-Assisted Redistricting Methodology” (book), with Kosuke Imai, Christopher Kenny, and Tyler Simko.

OTHER WRITING “Candy cane shortages and the importance of variation.” International Statistical Institute: *Statisticians React to the News* (December 21, 2021).

“Where will the rocket land?” International Statistical Institute: *Statisticians React to the News* (May 12, 2021).

“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

`ggredist`: Scales, Palettes, and Extensions of `ggplot2` for Redistricting

`wacolors`: Colorblind-friendly Palettes from Washington State

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

Society for Political Methodology, Annual Meeting, Paper: 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 Organized Ph.D. student retreat and research “lightning talks,”	2020 – 2020 and 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.	2019 – 2021
	Reviewer: <i>Sloan Foundation</i> .	

MEMBERSHIP	American Statistical Association, Society for Political Methodology, American Association for Public Opinion Research.
------------	--

WORK EXPERIENCE	University of Washington eScience Institute Data Science for Social Good Fellow University of Connecticut REU Participant, Department of Mathematics Fred Hutchinson Cancer Research Center Lead Intern, Department of Biostatistics Grinnell College Department of Mathematics Course Grader Cray, Inc. Intern, Chapel Language Testing	Summer 2019 Summer 2018 Summer 2017 2017 Summer 2015
--------------------	--	--