

# 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
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EDUCATION	<b>Harvard University</b> Ph.D. in Statistics, expected May 2023. Advisor: Kosuke Imai. A.M. in Statistics, March 2021.	2019 –
	<b>Grinnell College</b> 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	“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.
	“Regression of the Conditional Median,” with Xiao-Li Meng.
	“Algorithm-Assisted Redistricting Methodology” (book), with Kosuke Imai, Christo-

pher Kenny, and Tyler Simko.

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  
`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	2020 –
	Organized Ph.D. student retreat and research “lightning talks,”	2020 and 2021.
	Harvard Graduate Students Union – UAW Local 5118	2019 – 2021
	Elected member, Bargaining Committee, 2020–2021 and 2021–2024 contracts. Interim chair, Finance and Benefits Committee, 2020.	
	Reviewer: <i>Sloan Foundation</i> .	
MEMBERSHIP	American Statistical Association, Society for Political Methodology, American Association for Public Opinion Research.	
WORK EXPERIENCE	<b>University of Washington eScience Institute</b>	Summer 2019
	Data Science for Social Good Fellow	
	<b>University of Connecticut</b>	Summer 2018
	REU Participant, Department of Mathematics	
	<b>Fred Hutchinson Cancer Research Center</b>	Summer 2017
	Lead Intern, Department of Biostatistics	
	<b>Grinnell College Department of Mathematics</b>	2017
	Course Grader	
	<b>Cray, Inc.</b>	Summer 2015
	Intern, Chapel Language Testing	