Alec McClean

Contact	Legal name: Alexander Haderlein-McClean 5000 Forbes Ave, Pittsburgh PA, 15213 `https://alecmcclean.github.io` | alec@stat.cmu.edu | mccleanalec@gmail.com

Education

Carnegie Mellon University
Ph.D., Statistics   May 2024
Thesis: Heterogeneity, Optimality, and Sensitivity in Causal Inference
M.S., Statistics   May 2021

Swarthmore College
B.A., Economics and Mathematics   May 2016
Phi Beta Kappa

Research Interests

Theory: causal inference; functional estimation; nonparametric statistics and machine learning

Applications: economics; healthcare services research; criminology; medicine

Research Projects

Matteo Bonvini*, **Alec McClean***, Zach Branson, and Edward H. Kennedy. Incremental causal effects: an introduction and review. In Handbook of Matching and Weighting Adjustments for Causal Inference, pages 349–372, 2023.

*Equal contribution

Alec McClean, Zach Branson, and Edward H. Kennedy. Nonparametric estimation of conditional incremental effects. *Journal of Causal Inference*, 12(1):20230024, 2024.
Poster presentations at ACIC 2022, ENAR Spring Meeting 2023, and JSM 2023

Leah A. Jacobs, **Alec McClean**, Zach Branson, Edward H. Kennedy, and Alex Fixler. Incremental Propensity Score Effects for Criminology: An Application Assessing the Relationship Between Homelessness, Behavioral Health Problems, and Recidivism. *Journal of Quantitative Criminology*, pages 1–20, 2023.

Alec McClean, Edward H. Kennedy, Sivaraman Balakrishnan, and Larry Wasserman. Double Cross-fit Doubly Robust Estimators: Beyond Series Regression. arXiv preprint arXiv:2403.15175, 2024.
Winner of the Ten Have poster competition at ACIC 2023

Alec McClean, Zach Branson, Edward H. Kennedy. Calibrated sensitivity models. arXiv preprint arXiv:2405.08738, 2024.
Presentations at CMStatistics 2023 and ACIC 2024

Software

Contributor to `npcausal` R package https://github.com/ehkennedy/npcausal.

Academic Service

Reviewer for *Bernoulli*, the *American Journal of Epidemiology*,
and *ACIC 2024*

CMU Statistics Student Activities Committee representative	2019 - Present
CMU Statistics Student Mentor	2020 - Present
Pittsburgh ASA CMU student representative	2022 - Present

Teaching	**Department of Statistics and Data Science, Carnegie Mellon University**	
	As Course Instructor	
	Undergraduate Introduction to Statistical Inference	Summer 2022
	As Teaching Assistant	
	Undergraduate Introduction to Statistical Inference (Head TA and backup instructor)	Spring 2024
	Graduate Intermediate Statistics (Head TA)	Fall 2023
	Undergraduate Optum Summer Research Experience	Summer 2023
	Undergraduate Causal Inference	Spring 2022 & 2023
	Graduate Causal Inference	Fall 2022
	Undergraduate Advanced Methods for Data Analysis (Head TA)	Spring 2021
	Undergraduate Methods for Statistics	Summer 2021
	Undergraduate Modern Regression	Fall 2019
	Heinz College of Information Systems and Public Policy, Carnegie Mellon University	
	Graduate Statistical Reasoning with R (Head TA)	Fall 2020 & 2021
Awards	**Tom Ten Have award** for "exceptionally creative or skillful research on causal inference" at the 2023 American Causal Inference Conference	
	PhD Teaching Assistant of the Year, 2024, Carnegie Mellon University, Statistics & Data Science Department	
	Carnegie Mellon University Graduate Student Assembly Travel awards to present research at (1) 2023 CMStatistics, (2) 2023 Joint Statistical Meetings, and (3) 2022 American Causal Inference Conference	
	Phi Beta Kappa, Swarthmore College	Spring 2016
Work Experience	**Senior Research Analyst**, The Brattle Group • Managed teams of 10+ junior analysts in developing econometric and statistical models (including zero-inflated Poisson, Cox survival, and hierarchical Bayes) to create a state-of-the-art economic structural model of the health insurance industry. • Acquired extensive case experience in the health care industry with a focus on modelling expected claims incurred by health insurance subscribers and company likeliness to switch insurers.	2018 - 2019
	Research Analyst, The Brattle Group • Cleaned, analyzed, and organized large data sets (> 100 GBs) using SQL, R, and Python. • Created a >50 script data processing pipeline to efficiently clean and collate several TBs of data into analyzable data sets for project team use.	2016 - 2018
Skills	R, Python, LaTeX, Microsoft Office	