## Alec McClean


Contact

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Education

**Carnegie Mellon University**
Ph.D., Statistics — May 2024 (Expected)
*Areas of interest: Causal Inference, Health policy, Non and semi-parametric methods*
M.S., Statistics — May 2021

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

Research Interests

Causal Inference; Health Policy; Nonparametric statistics; Functional estimation

Research Projects

**Nonparametric Estimation of Conditional Incremental Effects**
*Under review at the Journal of Causal Inference*
https://arxiv.org/pdf/2212.03578.pdf
Poster presentations at ACIC 2022, ENAR Spring Meeting 2023, and JSM 2023

**Incremental causal effects: an introduction and review**
*Published in the Handbook of Matching and Weighting Adjustments for Causal Inference, 2023*
https://arxiv.org/abs/2110.10532

**Incremental Propensity Score Effects for Criminology: An Application Assessing the Relationship Between Houselessness, Behavioral Health Problems, and Recidivism**
*Under review at the Journal of Quantitative Criminology*
https://arxiv.org/abs/2305.14040

Ongoing Work

**Double Cross-fit Doubly Robust Estimators: Beyond Series Regression**
*Winner of the Ten Have poster competition at ACIC 2023*
https://alecmcclean.github.io/files/ACIC2023.pdf

## Teaching

**Department of Statistics and Data Science, Carnegie Mellon University**

**As Course Instructor**

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|---|---|
| *Introduction to Statistical Inference* | Summer 2022 |

**As Teaching Assistant**

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| *Optum Summer Undergraduate Research Experience* | Summer 2023 |
| *Introduction to Causal Inference* | Spring 2022 & 2023 |
| *Graduate Causal Inference* | Fall 2022 |
| *Advanced Methods for Data Analysis* (served as Head TA) | Spring 2021 |
| *Methods for Statistics* | Summer 2021 |
| *Modern Regression* | Fall 2019 |

**Heinz College of Information Systems and Public Policy, Carnegie Mellon University**

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|---|---|
| *Statistical Reasoning with R* (served as Head TA) | Fall 2020 & 2021 |

## Service

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| CMU Statistics Student Activites Committee representative | 2019 - Present |
| Pittsburgh ASA CMU student represenatative | 2022 - Present |

## Work Experience

**Senior Research Analyst**, The Brattle Group — 2018 - 2019

- 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.

**Research Analyst**, The Brattle Group — 2016 - 2018

- 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.

## Awards

**Phi Beta Kappa**, Swarthmore College — Spring 2016
Cumulative undergraduate GPA: 3.91

**Kwink Trophy**, Swarthmore College — Spring 2016
Senior who best exemplifies the five principles of Service, Spirit, Scholarship, Society and Sportsmanship

**Scholar Athlete of the Year** — Fall 2014
Centennial Conference All-Conference athlete with the highest GPA

## Skills

R, Python, LaTeX, Microsoft Office