

Alan E. Mishler

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Profile

PhD student in statistics and machine learning, specializing in causal inference and algorithmic fairness. Former linguistics researcher with multiple publications and presentations in machine learning, cognitive science, and linguistics. Extensive experience interacting with non-technical clients.

Skills

Statistical: causal inference, semiparametric inference, supervised and unsupervised learning (regression, classification, clustering, deep learning, dimensionality reduction), hypothesis testing, convex optimization

Coding: Python (pandas, scikit-learn, matplotlib, seaborn, Jupyter, keras), R (tidyverse), SQL

Education

Current	PhD student in Statistics & Data Science, Carnegie Mellon University (ABD; expected graduation May, 2021)
05/2017	MS in Statistics, Carnegie Mellon University
08/2016	BS in Mathematics, University of Maryland
04/2009	BA in Linguistics, <i>summa cum laude</i> , minor in Japanese, University of Michigan

Employment

05/19–08/19	Data Scientist Intern: Google. Developed improved methodology to estimate ads lift/incrementality using combined experimental and observational data, with both empirical and theoretical results.
06/18–08/18	Data Scientist Intern: Google. Built a machine learning pipeline to probabilistically match entities in text with entries in a database.
05/17–08/17	Graduate Data Science Intern, Business Analytics: Box, Inc. Built a machine learning pipeline to automatically identify new marketing and sales leads.
09/10–08/16	Senior Faculty Research Specialist: University of Maryland Center for Advanced Study of Language Designed and analyzed experiments in areas such as topic modeling, signal detection, decision making, and speech perception. First author on 10 technical reports to the U.S. Government.

Selected peer-reviewed publications and presentations

2020	Amanda Coston, Alan Mishler , Edward H. Kennedy, Alexandra Chouldechova. (2020). Counterfactual risk assessments, evaluation, and fairness. <i>Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency</i> .
2019	Alan Mishler , Edward H. Kennedy. (2019). Counterfactual Fairness in the Actual World. Poster presented at the <i>Atlantic Causal Inference Conference</i> . Montreal, CA.
2019	Alan Mishler , Edward H. Kennedy, Amanda Coston, Alexandra Chouldechova. (2019). Modeling risk and achieving algorithmic fairness using potential outcomes. <i>Proceedings of the 2019 AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society</i> .
2018	Alan Mishler , Rebecca Nugent. (2018). Clustering students and inferring skill set profiles with skill hierarchies. Poster presented at the <i>2018 Classification Society Annual Meeting</i> . Stony Brook, NY.
2018	Alan Mishler , Edward Kennedy. (2018). Counterfactual prediction and fairness in risk assessment tools. Poster presented at the <i>2018 Atlantic Causal Inference Conference</i> . Pittsburgh, PA.
2017	Alan Mishler , Kevin Wonus, Wendy Chambers, Michael Bloodgood. (2017). Filtering tweets for social unrest. <i>Proceedings of the 2017 IEEE 11th International Conference on Semantic Computing (ICSC)</i> .

Awards

2017	Winner (as part of a team of 4) of the Fall 2017 Citadel Data Open at Carnegie Mellon. (550 student applications, 125 selected to compete; \$20,000 prize)
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