

# Eli Ben-Michael

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## EDUCATION

**University of California, Berkeley**, Berkeley, CA Expected 2021  
PhD in Statistics, Advisors: Avi Feller and Peng Ding

**Columbia University**, Columbia College, New York, NY May 2016  
Bachelor of Arts, *Summa Cum Laude*, Computer Science and Statistics

## PUBLISHED ARTICLES

Elser, H., **E. Ben-Michael**, D. Rehkopf, S. Modrek, E. A. Eisen, and M. R. Cullen (2019). Layoffs and the mental health and safety of remaining workers: a difference-in-differences analysis of the US aluminium industry. *Journal of Epidemiology and Community Health* 73, 1094–1100

## PREPRINTS AND WORKING PAPERS

**Ben-Michael, E.**, A. Feller, and J. Rothstein (2019). Synthetic controls and weighted event studies with staggered adoption

**Ben-Michael, E.**, A. Feller, and J. Rothstein (2019). The augmented synthetic control method

## OPEN SOURCE STATISTICAL SOFTWARE

[augsynth](#): R implementation of the augmented synthetic control method

## PRESENTATIONS

Synthetic control and weighted event study models with staggered adoption November 2019  
*Berkeley-Stanford Econometrics Jamboree*

Augmented Panel Data Models with Staggered Adoption May 2019  
*Atlantic Causal Inference Conference*  
Thomas R. Ten Have Poster Award runner up

Multi-level balancing weights for multi-site observational studies March 2019  
*Society for Research on Educational Effectiveness*

The augmented synthetic control method December 2018  
*2018 European Winter Meeting of the Econometric Society*

Matrix constraints and multi-task learning for covariate balance August 2018  
*7th Causal Inference Workshop at UAI*

## AWARDS AND HONORS

Department fellowship, Department of Statistics, U.C. Berkeley 2018  
Two years of funding through RTG grant: Advancing Machine Learning - Causality and Interpretability

Phi Beta Kappa, Columbia University 2016

Computer Science Department Award, Columbia University 2016  
Given to the top two graduating seniors each year

## TEACHING

**U.C. Berkeley Department of Statistics** *Graduate Student Instructor*  
Stat 232: Experimental Design with Sam Pimentel Fall 2018  
Stat 159/259: Reproducible and Collaborative Data Science with Fernando Perez Fall 2017

## INSTITUTIONAL SERVICE

PhD admissions committee, Department of Statistics, UC Berkeley Spring 2020  
Co-president of the Berkeley Statistics Graduate Student Association Fall 2018 - Spring 2019  
Reviewer for *Journal of Causal Inference*, and *Journal of Applied Econometrics*

## WORK EXPERIENCE

**Uber**, New York, NY Summer 2019  
*Data Science Intern*

- Built spatiotemporal models for feature extraction to enhance predictions in dispatch decisions
- Utilized factor analysis and auto-encoding neural networks to learn embeddings of ride behavior
- Created procedures to quickly isolate predictive contribution of features in black box models

**Walmart Labs**, Sunnyvale, CA Summer 2017  
*Machine Learning Scientist Intern*

- Designed models of consumer purchase behavior to learn latent representations of products
- Implemented efficient learning algorithms on tens of millions of consumer purchases with Spark
- Validated the representations' predictive power by reconstructing a human-generated catalog

**Knewton**, New York, NY Summer 2016  
*Data Science Intern*

- Generalized Bayesian models of student learning to incorporate hierarchical structure
- Scaled learning algorithms with a 10x speedup using Spark
- Analyzed performance, strengths, and weaknesses of models on student data

**Columbia University Department of Economics**, New York, NY Fall 2014 - Spring 2016  
*Research Assistant*

- Built a natural language processing text analysis application in Python for use by economists
- Performed econometric and statistical analysis on text data with associated metadata