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
Research Interests: Causal Inference, Machine Learning, Program Evaluation, Optimization

Columbia University, Columbia College, New York, NY — May 2016
Bachelor of Arts, *Summa Cum Laude*, Computer Science and Statistics
Honors: Phi Beta Kappa, Computer Science Department Award, Dean's List (Fall 2012-Spring 2016)

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

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 (2020). Variation in impacts of letters of recommendation on college admissions decisions: Approximate balancing weights for treatment effect heterogeneity in observational studies

Ben-Michael, E., A. Feller, and E. Stuart (2020). A trial emulation approach for policy evaluations with group-level longitudinal data

Keele, L., **E. Ben-Michael**, A. Feller, R. Kelz, and L. Miratrix (2020). Hospital quality risk standardization via approximate balancing weights

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

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 *Econometrica*, *Journal of the American Statistical Association*, *Journal of Educational and Behavioral Statistics*, *Journal of Causal Inference*, and *Journal of Applied Econometrics*

SKILLS

R, Python, Machine Learning, Experimental Design, Program Evaluation