

# CURRICULUM VITAE

Davis S. C. Berlind

## CONTACT INFORMATION

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## EDUCATION

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2021 - 2026	<b>Ph.D.</b> Statistics University of California, Los Angeles, Los Angeles, CA
2018 - 2020	<b>M.S.</b> Economics and Computation Duke University, Durham, NC
2012 - 2016	<b>B.A.</b> Philosophy, Politics, Economics – <i>Cum Laude</i> University of Pennsylvania, Philadelphia, PA

## HONORS AND AWARDS

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2018	Duke Economics Masters Scholar Award
2016	Delta Phi Alpha, National German Honor Society
2012 - 2016	Benjamin Franklin Scholar
2015 - 2016	Dean's List
2014 - 2015	Dean's List
2015	Wharton Public Policy Initiative Summer Funding Award

## RESEARCH EXPERIENCE

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Department of Statistical Science, Duke University

May 2019

I was an RA for Professor Rebecca Steorts. My research focused on applying Bayesian generative models to the area of record linkage and entity resolution. I replicated Steorts, R., Liseo, B. and Tancredi, A. (2018). *Generalized Bayesian Record Linkage and Regression with Exact Error Propagation*, and implemented the article's methods as an R package. Additionally, I worked with Professor Steorts and Professor Victor Bennett at the Fuqua School of Business to explore applications of `d-blink`, a Scala application for record linkage developed by Professor Steorts, to real economic data used in Professor Bennett's research. I worked on bench-marking the performance of `d-blink` against supervised methods used

for record linkage and entity resolution from the Machine Learning literature, e.g. Fellegi-Sunter. I am continuing to work with Professor Steorts on extending Steorts, Liseo, and Tancredi (2018) to the case of IV regression.

**Department of Economics, Duke University**

Jan. 2019

I was an RA for Professor Christopher Timmins. For the duration of my RAship, I worked on validating InfoUSA, a household data set of the entire US, against the American Community Survey (ACS). In addition to cleaning and handling the data in a cluster-computing environment, I researched the ACS sampling methodology in comparison to the sampling method used by InfoUSA, conducted a literature review of other data set validation studies, e.g. Wilhelm, M. (2006) *New Data on Charitable Giving in the PSID*, and researched data comparison methods, e.g. the Kolmogorov-Smirnov test, the Mann-Whitney  $U$  test, and the methods outlined in Handcock, M., and Morris, M. (1998) *Relative Distribution Methods*). I also assisted with other *ad hoc* tasks, e.g. managing the undergraduate research team, creating figures, and writing GIS and web scraping scripts.

**Department of Economics, University of Pennsylvania**

Sept. 2015 - Aug. 2016

I was an RA for Professors Eugen Dimant and Camilo Garcia Jimeno. For Professor Jimeno, I collected and cleaned data on lawsuits against Catholic Diocese in the US. For Professor Dimant, I conducted pre-trial surveys for an experimental game that tested economic incentives to lie when beliefs are influenced. I analyzed the data with a simple  $\chi^2$ -test to look for differences between treatment and control responses. I also collected and created a panel data set of US foreign military spending and corruption data from Transparency International.

## SELECT WRITING

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“Infective Altruism: Why Do the Poor Give More?” (Unpublished)

Term paper written for Econ 605: Advanced Microeconomic Analysis. Creates a framework for explaining the gap in the percentage of income that poorer individuals contribute to charity over higher-income individuals. The model I designed uses a multi-group Susceptible-Infected-Susceptible model from epidemiology and a game in which agents contribute to a public good.

“Nowcasting US GDP: A Machine Learning Approach.” (Unpublished)

Term paper written for STA 561: Probabilistic Machine Learning. Compares the performance of various Machine Learning models, including Ridge, Bayesian, Elastic Net, and Gaussian Process regressions, against AR methods for generating “nowcasts” of US GDP with a sample of nearly 700 economic indicators from FRED. Also wrote the python code for scraping FRED data, making an automated nowcast tool.

## SOFTWARE AND PROGRAMMING

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**STL2018** – An R package implementation of the methods described in Steorts, R.C., Tancredi, A., Liseo, B. Generalized Bayesian Record Linkage and Regression with Exact Error Propagation, PSD (2018). The methods implemented in this package enable the user to recreate the experiments described in this paper, and allow for further experimentation with joint record linkage and linear regression tasks.

**Programming Languages:** Java, Python, R, MATLAB

**Typesetting:** L<sup>A</sup>T<sub>E</sub>X, Markdown

**Other:** Git, Bash

**Cluster Computing:** Slurm Workload Manager

## PROFESSIONAL EXPERIENCE

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**NYC Mayor’s Office of Management and Budget**, New York, NY      July 2017 - Aug. 2018

- As an Analyst, monitored and forecasted cash flows from licenses, registrations, permits, and other sources of Miscellaneous Revenue for the Taxi and Limousine Commission, the Parks Department, the Department of Consumer Affairs, and the Office of Administrative Trials and Hearings (over \$300 million total annually).
- Wrote R scripts to automate the creation of reports and implement an ARIMA that leveraged real-time Google Trends data to forecast the City’s future for-hire vehicle license revenue.
- Researched pending legislation to quantify the fiscal impacts of anticipated policy changes. Specifically, worked with Dr. Francesco Brindisi on modelling the demand-side effects of congestion pricing on the for-hire vehicle industry. This work included cleaning 400 million trip records using regular expressions, mapping trip data using R as a GIS, and calculating the cross-price elasticity of demand between taxis and Ubers.

**Cleary Gottlieb Steen & Hamilton LLP**, New York, NY      Aug. 2016 - July 2017

- Worked first as a paralegal and later as the Leverage Finance Coordinator.
- Examined precedent transactions to fill information requests from attorneys.
- Assisted attorneys with due diligence, closing transactions, preparing filings with the SEC and other governmental agencies.

**The Brookings Institution**, Washington, DC      May 2015 - Aug. 2015

- Worked as a research intern under Bruce Katz and his research assistants at the Metropolitan Policy Program.
- Conducted original research on Local Government Investment Pools (LGIPs) and the role such funds play in intergovernmental revenue sharing.

- Compiled books, reports, and articles on municipal economic policy into weekly research briefings.

**Office of Housing and Community Development**, Philadelphia, PA      June 2014 - Aug. 2014

- Compliance Intern selected as part of the Mayor's Internship Program.
- Built database of OHCD contracts and analyzed trends in spending over five-year period to determine why certain firms failed to meet required hiring standards for Minority and Women Owned Business Enterprises.
- Served in supplementary role as Program Analyst for Philadelphia Food Access Collaborative by surveying the needs of Philadelphia's homeless population and presenting the results of this survey to Mayor Michael Nutter.

**Phillips Pharms**, Parker, CO

June 2013 - Aug. 2013

- Worked as a ranch hand caring for livestock and making equipment repairs.

## **VOLUNTEERING AND SERVICE**

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Brooklyn Lacrosse Club

- Volunteer Lacrosse coach for 8<sup>th</sup> graders in Brooklyn, NY from 2017-2018.

Penn For Youth Debate

- Volunteer middle and high school debate coach in Philadelphia Public Schools from 2012-2016.
- Served as organization's vice president from 2015-2016, and spring tournament director from 2014-2015.

## **CLUBS AND EXTRACURRICULARS**

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Penn Undergraduate Law Journal

- Editor-in-Chief (2015 - 2016)
- Director of Communications (2014 - 2015)
- Associate Editor (2013 - 2014)

Penn Club Ski Team (2012 - 2016)