

# Olivia Bernstein

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## Education

### **Ph.D. Statistics**

Expected: 2022

### **M.S. Statistics**

June 2019

UC Irvine, Irvine, CA

- NSF Graduate Research Fellowship (2019-2022)
- ARCS Foundation Scholar (2019-2021)
- UCI Statistics Department's Outstanding Graduate Teaching Assistant Award (2018)

### **B.S. Applied Math & B.S. Chemistry**

Aug 2017

Biola University, La Mirada, CA

## Experience

### **Research Assistant**

July 2018 – Current

UC Irvine, Irvine, CA

- Awarded NSF fellowship to investigate methods to reduce bias in prediction models when training data is not representative of the population
- Created and implemented an analytic plan to analyze the effects of education on willingness to enroll in clinical trials and estimated that the odds of being willing to be contacted about a study involving lumbar punctures was 67% higher for participants who received a gain frame message about side effects compared to those who received a loss frame message. This can help increase enrollment rates for Alzheimer's clinical trials
- Investigated the impact of study partner type (spouse, adult child, friend, other) on trial variance and potential bias in Alzheimer's Disease clinical trials and found little evidence of an impact of study partner type

### **Data Science Intern**

May 2021 – August 2021

Facebook, Menlo Park, CA

- Conducted data analyses to explore user behaviors and business insights
- Communicated recommendations for improving products
- Collaborated with cross-functional peers to design experiments to compare ranking models

### **Reporting Data-Analyst Intern**

Jan 2017 – Sep 2017

Open Doors USA, Santa Ana, CA

- Automated financial reporting saving 4 days of work each month by moving Excel dashboards to Tableau
- Created plots and presented results to finance and communications teams to identify likely donors
- Researched similar organizations and analyzed industry trends

### **Summer Undergraduate Research Fellowship**

June 2016 – July 2016

Center for Computational Quantum Chemistry, University of Georgia, Athens

- Computed chemical properties of methylene amidogen using quantum chemistry methods
- Investigated discrepancies between theoretical and experimental results
- Completed quantum chemistry programming projects in python

### **Intern and Research Assistant**

May 2015 – Jan 2016

Innovative BioDefense, Inc., Lake Forest, CA

- Researched safety, efficacy, and usage data for antiseptic active ingredient, benzethonium chloride
- Compiled and wrote an argument paper to be presented to the FDA
- Discovered and obtained old Bactine antiseptic bottles to prove it contained benzethonium chloride to establish historical use

## Publications

- “Adjustment for Biased Sampling Using NHANES Derived Propensity Weights” Bernstein, OM. Vegetabile, BG; Salazar, CR; Grill, JD; Gillen, DL. To be submitted.
- “Anxiety and depressive symptoms and cortical amyloid- $\beta$  burden in cognitively unimpaired older adults” Lewis, CK; Bernstein, OM; Grill, JD; Gillen, DL; Sultzer, DL. *The Journal of Prevention of Alzheimer's Disease*. Forthcoming.
- “Recruitment and retention of participant and study partner dyads in two multinational Alzheimer's disease registration trials” Bernstein, OM; Grill, JD; Gillen, DL. *Alzheimer's Research & Therapy*. 2021.
- “Education and message framing increase willingness to undergo research lumbar puncture: A randomized controlled trial” Witbracht, MG; Bernstein, OM; Lin, V; Salazar, CR; Sajjadi, SA; Hoang, D; Cox, CG; Gillen, DL; Grill, JD. *Frontiers in Geriatric Medicine*. 2020.
- “Reinterpreting the infrared spectrum of H + HCN: Methylene amidogen radical and its coproducts” Wiens, AE; Copan, AV; Rossomme, EC; Aroeira, GJR.; Bernstein, OM; Agarwal, J; Schaefer, HF. *The Journal of Chemical Physics*. 2018.
- “Fluorescent pseudorotaxanes of a quinodicyanocyanine dye with gamma cyclodextrin” Bernstein, OM; McGee, TE; Silzel, LE; Silzel, JW. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*. 2018.

## Teaching Experience

- Teaching Assistant, Basic Statistics—UC Irvine Fall 17, Winter 18, Spring 18

## Invited Presentations

- Using Statistics in Neuroscience—Talk at the Center for the Neurobiology of Learning & Memory Brain Camp at UCI Aug 2019
- Study Partner Type in Industry-Sponsored Alzheimer's Disease Registration Clinical Trials—Poster at the Clinical Trial in Alzheimer's Disease Conference Dec 2019
- Estimating Sampling Weights for Convenience Samples Using NHANES—Presentation at the Western North American Region of The International Biometric Society paper competition June 2020
- Estimating Sampling Weights for Convenience Samples Using NHANES—Poster at the Joint Statistical Meetings Aug 2020

## Journal Reviewer

- Alzheimer's & Dementia—Assisted Professor Daniel Gillen in reviewing article
- Electronic Journal of Statistics

## Leadership

- Outcomes Committee Co-Chair—Center for the Neurobiology of Learning & Memory Ambassador Program at UCI Jan 2019 – June 2021
- Representative—Diverse Educational Community and Doctoral Experience (DECADE) at UCI Feb 2018 – June 2018
- Treasurer—American Chemical Society Club at Biola University Aug 2016 – May 2017
- Student Representative—School of Science, Technology, and Health Strategic Planning and Steering Committee at Biola University Sep 2016 – May 2017
- Senator—Student Government Association at Biola University Apr 2015 – May 2016

Programming Languages and Software: R, SQL, Python, Tableau, Matlab, Excel, LaTeX, Bash