

Justin Williams, Ph.D.

Contact

- 📍 Los Angeles, CA
- ☎ (720)-936-7272
- ✉ just.williazo@gmail.com
- 🌐 <https://williazo.github.io>
- 🐙 github.com/williazo

Software Skills

R	<i>Preferred</i>
Git	<i>GitLab, GitHub</i>
Python	<i>Research</i>
SQL	<i>PostgreSQL, MySQL</i>
CI/CD	<i>GitLab, GitHub</i>
AWS	<i>S3, EC2, ECR</i>
Docker	<i>Productization</i>
SAS	<i>Coursework</i>
Stata	<i>Coursework</i>

Language

English	<i>Native</i>
Spanish	<i>Elementary</i>

Biography

Graduated from the University of California, Los Angeles (UCLA) with a Ph.D. in Biostatistics. Currently I am employed with the Los Angeles Dodgers as a Quantitative Analyst. I have a wide variety of experiences interning in industry along with extensive research work within the field of autism spectrum disorder

Professional Experience

Quantitative Analyst

08/2020 - Present

Los Angeles Dodgers-Los Angeles, CA

- Contribute to development of software and resources to aide in decision making
- Led productization efforts for products including setting up prediction and re-train tasks using Airflow
- Collaborated with amateur scouting department to build performance model for batters

Product Development Biostatistics Intern

Summer 2019

Genentech-South San Francisco, CA

- Designed software to simulate longitudinal differential abundance for microbiome: microbiomeDASim
 - Flexibly specify form of the trend over time including polynomial, oscillating, or hockey stick trends
 - Define desired sample size, number of repeated measures, and signal:noise ratio
 - Multiple choices for longitudinal dependence including: AR(1), compound, or independent
- Compared multiple methods for estimating differential abundance over time

Biostatistics R&D Intern

Summer 2018

Alcon-Ft. Worth, TX

- Developed methodology for parameter estimation of censored data from truncated normal distribution
- Investigated available methods for estimation with left censoring using R and SAS
- Produced functions and macros to simulate data and calculate bias metrics
- Applied methods to estimate parameters for historical clinical trial data

Predictive Analytics Intern

Summer 2016

Ingram Micro-Irvine, CA

- Illustrated regional product demand for products to inform warehouse stocking decisions
- Pulled purchasing and warehouse transaction information from servers via SQL
- Engineered product similarity scores based on feature list with mixed scale variables

Education

09/2016 - 12/2020

Biostatistics (Ph.D.)

University of California Los Angeles

Dissertation: "Methods for estimating causal effects for multivariate continuous exposure".

Advisor: Catherine Crespi

09/2014 - 06/2016

Biostatistics (M.S.)

University of California Los Angeles

Bachelor's thesis: "Bayesian hierarchical spatial analysis of autism spectrum disorder services in the Los Angeles Unified School District".

Advisor: Rob Weiss

09/2009 - 05/2013

Mathematics (B.A.)

Boston College

Research Interests

- ▶ Causal Inference
- ▶ Longitudinal Analysis
- ▶ Bayesian Analysis
- ▶ Machine Learning

Personal Interests

- ▶ Baseball
- ▶ Hiking
- ▶ Cooking
- ▶ Travel

Research Experience

Graduate Student Researcher

Connie Kasari Lab, UCLA Semel Institute

2015 - 2019

- Constructed Bayesian multi-level hierarchical model incorporating spatial random effects
- Developed longitudinal data visualization tools available in GitHub R package (ggplot.spaghetti)
- Clinical trial longitudinal analysis using mixed effects and generalized estimating equations
- Adjusted for empirical trends using zero-inflated and hurdle models with count outcomes
- Automated analysis for inter rater reliability
- Data management and data cleaning for multisite clinical trial database
- Co-authored multiple papers as primary statistician

Teaching Experience

Special Reader:

Computer Management of Health Data

UCLA, Biostatistics Department

Fall Quarter 2017

- Taught data management tools with SAS to 23 first-year Biostatistics graduate students
- Introduced tools for creating randomization schemes and generating reproducible data

Special Reader:

Basic Biostatistics

UCLA, Biostatistics Department

Winter Quarter 2016

- Led weekly lab sections using Stata on topics such as linear regressions, ANOVA, logistic regression, and non-parametric tests
- Designed and administered discussion sections weekly
- Graded homework and lab assignments

Publications

- Sturm, A., **Williams, J.**, and Kasari, C. (2021). Who gains and who loses? Sociodemographic disparities in access to special education services among autistic students. *Autism Research*, 14:1621–1632. doi:10.1002/aur.2517.
- Melamed, K.H, **Williams, J.**, Wang, X., Hu S., Nguyen C., Cui, J., & Deng, J.C. Development of secondary bacterial pneumonia in adults presenting with influenza versus noninfluenza viral respiratory infection. *Therapeutic Advances in Respiratory Diseases*, 14. doi:10.117/1753466620963026.
- **Williams, J.R.**, and Crespi, C.M. (2020). Causal inference for multiple continuous exposures via the multivariate generalized propensity score. *arXiv preprint*. arXiv:2008.13767

Awards & Honors

Dissertation Year Fellowship (\$20,000)

Awarded By: UCLA Graduate Division

Received: December 2019 – December 2020

Most Outstanding Oral Presentation (\$500)

Awarded By: Western North American Region of the International Biometric Society

Received: June 2019

Juneal Marie Smith Fellowship in International Nutrition (\$2,500)

Awarded By: UCLA Fielding School of Public Health

Received: June 2019

Graduate Summer Research Mentorship (\$6,000)

Awarded By: UCLA Graduate Division

Received: June 2017 - September 2017

- **Williams, J.R.**, Kim, H. and Crespi, C.M. (2020). Modeling observations with a detection limit using a truncated normal distribution with censoring. *BMC Med Res Methodol*, 20:170. doi:10.1186/s12874-020-01032-9
- **Williams, J.**, Bravo H.C., Tom J., and Paulson J.N (2020). *microbiomeDASim*: Simulating longitudinal differential abundance for microbiome data [version 2; peer review: 2 approved]. *F1000Research*, 8:1769. doi:10.12688/f1000research.20660.2
- Dean, M., **Williams, J.**, Kasari, C. and Orlich, O. (2020). Adolescents with autism spectrum disorder and social skills groups at school: A randomized trial comparing intervention environment and peer composition. *School Psychology Review*, 49(1):60-73. doi:10.1080/2372966X.2020.1716636
- Gulsrud, A., Carr, T., **Williams, J.**, Panganiban, J., Jones, F., Kimbrough, J., Shih, W., and Kasari, C. (2019), Developmental screening and early intervention in a childcare setting for young children at risk for autism and other developmental delays: A feasibility trial. *Autism Research*, 12(9):1423-1433. doi:10.1002/aur.2160
- Locke, J., **Williams, J.**, Shih, W. and Kasari, C. (2017), Characteristics of socially successful elementary school-aged children with autism. *J Child Psychol Psychiatr*, 58(1):94-102. doi:10.1111/jcp.12636

Presentations

2019 Joint Statistical Meetings

"Maximum Likelihood Estimation of a Truncated Normal Distribution with Censored Data"

Denver, Colorado

2019 Western North American Region (WNAR) of the International Biometric Society

"Maximum Likelihood Estimation of a Truncated Normal Distribution with Censored Data"

Portland, Oregon

2018 Joint Statistical Meetings

"Propensity Score Methods for Studies with Clustered Data and Continuous Exposure"

Vancouver, BC, Canada

2018 Gatlinburg Conference

"Using Clustering to Define ASD Subgroups with Differential Play Outcomes"

San Diego, CA