Justin Williams

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EDUCATION

University of California, Los Angeles (UCLA)
Ph.D. – Biostatistics *Expected 2020*
M.S. - Biostatistics *2016*

Boston College
B.A. – Mathematics *2013*

WORK EXPERIENCE

Graduate Student Researcher *2015 - Present*
Connie Kasari Lab

- Constructed Bayesian multi-level hierarchical model incorporating spatial random effects
- Established 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

Product Development Biostatistics Intern *Summer 2019*
Genentech

- 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

- 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

SOFTWARE SKILLS

R (coursework/teaching/research/preferred)
Stata (coursework/teaching)
Julia (coursework)
GitHub (primary version control software)
SQL (work experience)
SAS (internship/coursework/teaching/work)
Python (research)
HPC (high performance computing on cluster)

RESEARCH INTERESTS

-Causal Inference	-Longitudinal Analysis	-Machine Learning
-Bayesian Analysis	-Spatial Modeling	-Trial Design

PUBLICATIONS

Academic Journals

(1) Williams, J., Kim, H., & Crespi, C. (In Review). "Maximum Likelihood Estimation of a Truncated Normal Distribution with Censored Data", *Statistics in Medicine*.
(2) Dean, M., Williams, J., Kasari, C., & Orlich, O. (Pre-publish). "Adolescents with autism spectrum disorder and social skills groups at school: A randomized trial comparing intervention environment and peer composition", *School Psychology Review*.

(3) Gulsrud, A., Carr, T., Williams, J., Panganiban, J., Jones, F., Kimbrough, J., Shih, W., & 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

(4) Locke, J., Williams, J., Shih, W., & Kasari, C. (2017). "Characteristics of socially successful elementary school-aged children with autism", *Journal of Child Psychology and Psychiatry* **58**(1), 94-102. doi:10.1111/jcpp.12636

AWARDS & HONORS

- **Most Outstanding Oral Presentation**

Awarded By: *Western North American Region of the International Biometric Society*
Received: June, 2019

- **Juneal Marie Smith Fellowship in International Nutrition**

Awarded By: *UCLA Fielding School of Public Health*
Received: June, 2019

- **Dissertation Year Fellowship**

Awarded By: *UCLA Graduate Division*
Received: December 2019 – December 2020

- **Graduate Summer Research Mentorship**

Awarded By: *UCLA Graduate Division*
Received: June 2017 – September 2017