Sydney Kahmann

skahmann@ucla.edu | https://skahmann3.github.io/ | https://github.com/skahmann3

Education

PhD Statistics, University of California, Los Angeles, GPA: 3.89/4.00 Expected June 2021
National Science Foundation Graduate Research Fellow: June 2019-Present.
Awarded $34,000 stipend and $12,000 education allowance for three years of graduate study.

BS Statistics, University of California, Los Angeles, GPA: 3.61/4.00 June 2017
UCLA Vice Provost's Prize Medal of Excellence: 2016.

Statistics Coursework:
Causal Inference; Experimental Design and Sampling; Machine Learning; Computational Statistics; C++ Programming; Statistical Programming (R, Python, SQL, UNIX); Monte Carlo Methods; Spatial Statistics; Probability; Optimization

Skills

Programming:	R	Python	C/C++		
Statistical Software:	Tableau	R Shiny	Stata	SPSS	SAS
Additional Software:	SQL	LaTeX	Git	UNIX	Microsoft Office/ Excel

Data Science/Analytics Experience

Graduate Researcher. UCLA

Luskin School of Public Affairs, Department of Social Welfare January 2019 – Present

- Measure causal impact of 2 high-profile LA Police Department, City of LA policies by developing and improving synthetic control approaches as causal inference methodologist on interdisciplinary policy evaluation teams.
- Using R, supplement models with extensive robustness, falsification, and sensitivity analyses to assess relative performance and evaluate bias/ precision, contextualizing results for policy leaders in absence of standard errors.
- Develop new methodology to address staggered policy adoption with multiple, switching forms of treatment.
- Utilize AWS server to manipulate, merge, and analyze large, high-dimensional dataset created from 33 crime datasets, classifying 22 million reported call and incident observations, and 24 Census datasets.
- Communicate complex analyses, work with team to identify important empirical questions, interpret results, and present actionable insights during quarterly collaborative meetings with 10+ person cross-functional group.

Department of Statistics June 2018 – October 2018

- Lead developer on 4-person team for R package implementing 6 equivalence versions of statistical tests for common causal design assumptions. Package hosted publicly on Github: https://github.com/idssucla/equivtest.
- Implemented unit tests, power and coverage simulations to verify optimal functionality.
- Generalized functions for widespread use, collaborated with Dept. programmer to ensure sustainability of code.

Statistical Communications Experience

Statistical Consultant. UCLA Statistical Consulting Center October 2017 – June 2019

- Consulted with academics and professionals in 6 weekly office hours on quantitative problems ranging from research design to final analyses/ report.
- Recommended appropriate statistical/ machine learning methods, brainstormed solutions to analytical problems, taught clients quantitative techniques, and troubleshooted coding issues in R, Python, Stata.
- Worked with a small team to devise and implement tailor-made data analysis plans for paying clients in applied research and product development from the Los Angeles area.

Teaching Assistant. UCLA Department of Statistics Summer 2018, Fall 2018

- Taught weekly discussion sections and held office hours for required upper-division courses for UCLA statistics majors: 1) STATS 100A: Probability and 2) STATS 102A: Computational Statistics with R.
- Course topics included: 1) probability, random variables, density and distribution functions, properties of estimation and 2) dplyr/ tidyverse, web scraping, ggplot2, numerical methods/ optimization, simulation, bootstrap.
- Received excellent teaching evaluations across all categories including knowledgeability, concern about student learning, organization, communication skills, interaction, and overall.

Research: Causal inference, social science applications.

Software

equivtest (R package): Equivalence Testing for Balance and Placebo Tests (with Erin Hartman, F. Daniel Hidalgo). **https://github.com/idssucla/equivtest**.

Papers

(DRAFT) Kahmann, S., Hartman, E., and Brantingham, P.J. (2019) "Violent Crime and the LAPD Community Safety Project: A Synthetic Control Approach to Crime Policy Evaluation."

Sanchez, J. and Kahmann, S. (2017). "R&D, Attrition and Multiple Imputation in BRDIS." Center for Economic Studies, U.S. Census Bureau Working Paper 17-13. **ftp://ftp2.census.gov/ces/wp/2017/CES-WP-17-13.pdf**.

Conferences

2017. R&D, Attrition and Multiple Imputation in The Business Research and Development and Innovation Survey. With co-presenters: Juana Sanchez and Dennis Li. Annual Conference of the Federal Statistical Research Data Center on "Big Data." September 14, 2017, Los Angeles, California. **http://escholarship.org/uc/item/1bx747j2.**