

# Emily K. Sanders

[LinkedIn](#), [GitHub](#): emilyksanders

## Social Scientist

Social scientist who excels at thorough data analysis, research methods, and creative problem-solving. Leveraging a Masters of Science in social psychology and extensive training in data science, I am eager to use my skills to solve real-world problems and improve lives. I am passionate about social justice, especially LGBTQ+ issues, and seeking roles that have a genuine impact for good.

**Research Interests:** prevalence and determinants of poor social well-being, primarily among marginalized groups, and practical, applicable, evidence-based interventions to promote better, more prosocial outcomes

## Skills

**Programming & Visualization:** Python (pandas, sklearn, matplotlib, seaborn, numpy, requests), Jupyter, Git, SQL, R, RStudio, SPSS

**Productivity:** Qualtrics, Microsoft Office (Word, Excel, PowerPoint, Outlook), G-Suite, ChatGPT, Box, SMS outreach tools, Canva

**Research:** Data collection, data management, survey design, experimental design, literature reviews, meta-analysis, technical writing

**Statistics & Models:** Linear regression, logistic regression, correlation, ANOVA, ARIMA, neural nets, significance tests (e.g., t-tests)

**Teamwork:** Communication, can-do attitude, strong problem solver, persistent, good under pressure, conscientious, attention to detail

## Research Experience

**Researcher** | PI: Chadly Stern, PhD. | UIUC Department of Psychology | Political Ideology and Groups Lab | 2016-2017

*Disgust as a Driver of Homophobia*

- Developed a series of studies to explore the role of disgust in homophobic attitudes and behaviors
- Created an IAT regarding gay men and disease, and collected sufficient participant data to meet a priori statistical power standards

**Researcher** | PI: Dolores Albarracin, PhD. | UIUC Department of Psychology | Social Action Lab | 2015-2017

*Meta-analysis of the effects of behavioral and nonbehavioral primes on behavior*

- Meta-analyzed published and unpublished studies to assess priming methods that correlate with effect sizes of behavioral outcomes
- Cleaned, organized, completed, preprocessed, and analyzed a large, inherited data set using R, especially the *metafor* package
- Supervised a team; instructed team members to implement my solutions for complex data hygiene and management problems
- Estimated an overall effect size, drew inferences about publication bias, and assessed moderators from 682 eligible effect sizes

*Community Norms, Online Communications, and HIV Risk*

- Designed a two-phase study using natural language processing to predict HIV risk from Tweets, while mitigating ethical concerns
- Created Phase 1 to anonymously link intentions and behaviors, and Phase 2 to collect identifiable Twitter data with intentions only

*Self-Talk in Isolation*

- Designed and implemented two pilots and one full study to examine the effects of isolation versus social support on self-talk
- Trained research assistants to conduct the experimental procedure and pose as confederates
- Included checks on the efficacy of the manipulation, and on any pre-existing differences between control and experimental groups
- Presented methods, results, interpretation, and future directions in a year-end departmental meeting

**Capstone Student** | PI: Holly McCartney Chalk, PhD. | McDaniel College Department of Psychology | 2012-2014

*Predictors of Psychological Outcomes in Nonheterosexual individuals*

- Planned and executed a survey study on mental health drivers among queer people, especially minority stress and positive identity
- Designed the data collection survey, implemented snowball sampling, and applied and analyzed several tests of significance
- Identified different drivers for gay/lesbian than for bisexual/pansexual people, supporting some prior results and challenging others

**Lab Assistant** | PI: Margaret McDevitt, PhD. | McDaniel College Department of Psychology | Pigeon Lab | 2012

*Pigeons' Preference for Information*

- Designed a behavioral study on information use in decisions and instructed students on lab protocols, including pigeon care

## Data Science Projects

**Pride and Joy** | Inferential model: Linear regression | June 2024

- Tools: Python (esp. pandas, sklearn, matplotlib, seaborn, numpy, statsmodels, os, datetime), Jupyter notebooks, RStudio for Python
- Modeled psychological distress in *Generations* data (Meyer, 2023) of 1518 LGBTQ+ people, seeking harmful or protective factors
- Addressed challenges related to sample size, overfitting, missing data and null values, and an aging dataset
- Identified poverty, stress, and queerphobia as drivers of distress, but social support and positive identity formation as protective

### It Takes a Village | Predictive models: Linear regression, Random forest regression | May 2024

- Tools: Python (esp. pandas, sklearn, matplotlib, seaborn), Jupyter notebooks, RStudio for Python
- Collaborated to investigate how various social conditions predict high school dropout rates at the county level in California
- Addressed significant obstacles related to sample size (initially  $n=58$ , then fewer), missing data, and non-normal distributions
- Interpreted current results where possible (recommended to curtail e-cigarette availability), and made suggestions for future work

### Explain Like I'm (Not) a Scientist | Classification models: KNN, Naïve Bayes | May 2024

- Tools: Python (esp. pandas, sklearn, requests, nltk, string, matplotlib, seaborn), Jupyter notebooks, RStudio for Python, Reddit API
- Scraped Reddit posts from r/ELI5 and r/AskPhysics, as exemplars of scientific communication for laypeople versus for experts
- Used natural language processing to analyze the posts and gridsearched to optimize classification models sorting them by source
- Created a high accuracy ( $>84\%$ ), low variance ( $<0.0006$ ) model, indicating that these subreddits may be useful for more research

### Real Estate: It's Ame-azing! | Predictive model: Linear regression | April 2024

- Tools: Python (pandas, sklearn, numpy, matplotlib, seaborn, scipy), Jupyter notebooks, RStudio for Python
- Developed a reproducible data ingestion and preparation process based on a dataset of 2051 home sales in Ames, Iowa
- Designed and evaluated several linear models to predict home prices based on nearly 80 attributes
- Adopted a LASSO regression model ( $R^2=0.92$ ) that predicted prices within \$22,696, a  $>\$55,000$  improvement from baseline

## Work and Volunteer Experience

### **Data Science Fellow** | General Assembly | Remote | 2024

- Successfully completed a 12 week, full-time immersive program of 400+ hours of professional training
- Built, evaluated, and optimized exploratory data analysis, data visualization, statistical modeling, and machine learning in Python
- Developed and presented open-ended projects, individually and on teams, to explore and refine various issues, methods, and skills

### **Sales Associate** | Byrne Dairy & Deli | Lafayette, NY | 2021-2024

- Demonstrated leadership and consistent performance in a fast-paced environment and managed competing, simultaneous demands
- Ordered ice cream stock: reduced waste and expenses via a new error-proofing system and other practices; improved shelf appeal
- Earned frequent positive customer feedback for my courtesy, attentiveness, conscientiousness, and competency
- Maintained competency certifications in compliance with all laws and company policies

### **Organizer** | Service Employees International Union Local 200United | Syracuse, NY | 2018-2020

- Recruited higher ed workers to join unions via in-person visits, phone- and text-banking, and a digital organizing program I created
- Hosted weekly Zoom calls with members across the state to encourage inter-school connections
- Became proficient in relevant databases and other online tools, including Canva, G Suite, WordPress, and mass texting
- Managed Facebook ads, including analytics, compliance, and budget, to earn 160+ group joiners, ~2000 page likes, and ~50 leads
- Served as a subject matter expert during the abrupt transition to remote work at the outset of the pandemic

### **Bargaining Team Member** | Graduate Employees Organization (AFT-IFT 6300) | Champaign, IL | 2016-2018

- Collaborated on the design, distribution, and analysis of a survey to determine members' needs from a contract
- Researched and drafted contract language for GEO's comprehensive proposal and subsequent packages
- Strategized to create mutually beneficial resolutions to problems and an implementation plan, including timelines
- Bargained directly with the administration, including as lead negotiator, resulting in a successful, member-ratified contract

### **Short-Term Organizing Intern** | American Federation of Teachers (AFT) | Chicago, IL | 2017

- Organized graduate workers at the University of Chicago to sign cards and make a plan to vote yes for their union
- Recognized for creating and implementing a phonebanking strategy for making detailed vote plans and confirming votes
- Utilized and updated the database of member information

### **Graduate Teaching Assistant** | UIUC Department of Psychology | Champaign, IL | 2015-2017

- Taught 2 sections per semester of 3 undergraduate psychology courses over 2 years (i.e., 3 syllabi; 8 sections in 4 semesters)
- Prepared and delivered lectures, implemented educational activities, and designed, administered, and graded assignments
- Instructed students on social psychology concepts, statistical methods and tools (e.g., SPSS, R), citation styles, and writing skills
- Advised student research: hypothesis creation, literature review, methods, data collection, data analysis, and drawing inferences
- Maintained confidentiality in compliance with FERPA

### **Cat Adoption Counselor** | Danbury Animal Welfare Society | Bethel, CT | 2015

- Mastered shelter software and created and maintained a spreadsheet of cat info, improving the efficiency of cat adoptions

### **Executive Board Member** | Allies: The LGBTQ Alliance of McDaniel College | Westminster, MD | 2011-2014

- Led projects including an It Gets Better video, a voter information drive, and two charity drag shows benefiting the Trevor Project
- Contributed to drafting the annual budget and monitoring spending, including seeking sponsorship partners

## Publications and Presentations

- Sanders, E. K., & Chalk, H. M.** (2016). Predictors of psychological outcomes in nonheterosexual individuals. *Psi Chi Journal of Psychological Research*, 21(2), 100-110. <https://doi.org/10.24839/2164-8204.jn21.2.100>
- Dai, W., Yang, T., White, B. X., Palmer, R., **Sanders, E. K.**, McDonald, J. A., Leung, M., & Albarracín, D. (2023). Priming behavior: A meta-analysis of the effects of behavioral and nonbehavioral primes on overt behavioral outcomes. *Psychological Bulletin*, 149(1-2), 67-98. <https://doi.org/10.1037/bul0000374>
- Sanders, E. K.**, Palmer, R., Dai, W., Textor, C., Weingarten, E., Hepler, J. ... & Albarracín, D. (May 2017). Is the straightest path always best? A meta-analytic investigation of directly and indirectly linked priming objects and behavioral outcomes. Poster presented at the meeting of the Association for Psychological Science, Boston.
- Sanders, E. K.**, Palmer, R., Dai, W., Textor, C., Weingarten, E., Hepler, J. ... & Albarracín, D. (January 2017). Can ideas activate behavior? A meta-analysis of the effects of a variety of conceptual priming objects and strategies on behavioral outcomes. Poster presented at the meeting of the Personality & Social Psychology, San Antonio.
- Sanders, E. K.** (March 2014). Predictors of psychological outcomes in sexual minorities. Poster presented at the meeting of the Eastern Psychological Association meeting, Boston.
- Sanders, E. K.** (March 2014). Predictors of psychological outcomes in sexual minorities. Poster presented at the meeting of the Maryland Collegiate Honors Council meeting, Westminster, MD.

## Education

**Certificate of Completion | Data Science Immersive | General Assembly | Remote | Graduated: 2024**

- **Projects:** Pride and Joy, It Takes a Village, Explain Like I'm (Not) a Scientist, Real Estate: It's Ame-azing!

**Masters of Science | Psychology | University of Illinois at Urbana-Champaign | Champaign, IL | Graduated: 2017**

- **Specialization:** Social Psychology
- **Related Coursework:** Statistical Methods I & II; Hierarchical Linear Models; Social Psychology Theory & Methods; Applied Regression Analysis; Statistics Programming Methods

**Bachelor of Arts | Psychology | McDaniel College | Westminster, MD | Graduated: 2014**

- **Minors:** Women's Studies, American Sign Language and Deaf Culture
- **Honors:** Magna Cum Laude, Phi Beta Kappa, College Scholar, Honors in Psychology, Psi Chi, Alpha Lambda Delta, Dean's List
- **Related Coursework:** Living in the Margins; Psychology of Gender; Writing in Psychology; Sex, Gender, and Religion; Gay around the Globe; Serving LGBT Communities; Understanding Feminism; Gender Roles in the Economy; Gender and Communication; Gender and Society; Walk on the Wilde Side