

BRANDON L. KRAMER, PHD

brandonleekramer@gmail.com | <https://www.linkedin.com/in/brandonleekramer/> | www.github.com/brandonleekramer

SUMMARY

PhD-level computational social scientist using data science, graph analytics, and natural language processing to conduct social and behavioral research. Expertise in research design, data management, data analysis, and data visualization to address real-world problems. Background in experimental and survey design, working with administrative, geospatial, and text data, supervised and unsupervised machine learning methods, graph/network analytics, as well as combining qualitative and quantitative methods to extract insights from unstructured text data. Proficient in R, Python, SQL, SPSS, Stata, Git, GitHub, bash, LaTeX, Gephi, Qualtrics, and high-performance computing environments. Strong communication, writing, public speaking, and project management skills.

PROFESSIONAL EXPERIENCE

Postdoctoral Researcher

2019-Present

University of Virginia Biocomplexity Institute - Social and Decisions Analytics Division

Arlington, VA

- Partnered with university, non-profit, and government stakeholders to develop, execute, and disseminate research projects on social, economic, and health-related issues across multiple scales of analysis
- Built data analysis and visualization pipelines in high-performance computing environment using R and Python
- Performed data extraction, transformation, and loading (ETL) of administrative, survey, text, and behavioral data using PostgreSQL to produce analysis-ready datasets for team members across multiple institutions
- Developed advanced SQL queries to clean, manage, and summarize large-scale datasets for reports to division director and project stakeholders during team's monthly progress reports
- Conducted descriptive and inferential statistical analyses, including linear regression and logistic regression, to compare historical trends and prospective policy reform at local, state, and federal levels
- Developed predictive modeling tool to assess potential risks for community members in local housing markets
- Leveraged supervised text mining and unsupervised natural language processing strategies, including topic modeling and word embedding algorithms like Word2Vec, to draw insights from unstructured text data
- Identified key influencers and change in the structural dynamics in information flows across large-scale social network data using insights from graph theory and network science
- Collected survey and experimental data to understand group decision-making and collective behavioral processes during simulated social events on Amazon's Mechanical Turk (MTURK) platform
- Collaborated with statisticians at US federal agency to refine economic procedure for estimating the labor costs of open-source software development at ~\$512 billion globally
- Managed multiple teams of graduate and undergraduate students to complete stakeholder-sponsored data science projects during 11-week Data Science for the Public Good Young Scholars program
- Created dashboards, websites, and online interactive visualizations using Rmarkdown, RShiny, and Gephi to tell compelling data-driven stories to non-technical audiences
- Wrote technical reports, whitepapers, and academic publications (Word, LaTeX) in addition to delivering presentations (PowerPoint, LaTeX) to communicate research findings to academic and government stakeholders
- Documented reproducible research and version control using Git, GitHub, RMarkdown, Jupyter Notebooks, and LaTeX to facilitate and improve collaboration across multi-institutional team setting

Doctoral Researcher

2012-2019

Rutgers University - Department of Sociology

New Brunswick, NJ

- Conceptualized and executed mixed-method research project using quantitative, qualitative, and historical techniques to examine ethical issues in biomedical and health research
- Prepared literature reviews to identify research problems, design, and complete independent research projects
- Conducted qualitative content analyses and systematic reviews using NVIVO and Excel to ascertain medical claims about racial disparities in biological markers and health outcomes

- Developed two network-based procedures to examine the spread of misinformation in health research
- Presented research to large academic audiences at 12 national and international conferences
- Wrote grant proposals and secured over \$10,000 in additional research and conference travel funding

Graduate Research Assistant

2012-2019

Rutgers University

New Brunswick, NJ

- Worked collaboratively with principal investigators, graduate, and undergraduate students on three different multidisciplinary teams conducting research on health-focused research projects
- Managed research laboratory collecting experimental, survey, biological, and interview data to study men's health
- Hired, supervised, and mentored 25 undergraduate students how to conduct literature reviews, run experiments, collect and store biological specimens, and clean data over four-year period
- Standardized protocols and procedures for experimental studies collecting highly-sensitive biological data, including how participants were recruited, tracked, and informed of study's risks and benefits
- Programmed and disseminated surveys in Qualtrics as part of a multi-cohort longitudinal study
- Developed inferential network analysis models to track political exchanges over time using AWS EC2 platform
- Performed multivariate analyses and visualized data in SPSS, Stata, and R statistical software environments
- Drafted, edited, and proofread manuscripts, abstracts, and posters for publication and conference presentations
- Ensured compliance with Institutional Review Board regulations

Graduate Instructor and Graduate Teaching Assistant

2015-2017

Rutgers University, Department of Sociology

New Brunswick, NJ

- Designed and delivered lectures on sociology, medicine and health to more than 150 students over two semesters
- Advised undergraduate students on research design and provided support with quantitative and qualitative analysis
- Presented topics in sociology of health, sociological theory, and research methods to groups of 30-90 students
- Developed engaging multimedia resources for recitation groups and led large group discussions
- Evaluated and counseled students on academic progress and preparation for graduate school
- Named to department honor roll for teaching effectiveness and the overall quality of instruction

EDUCATION

Ph.D. Sociology, Rutgers, The State University of New Jersey, New Brunswick, NJ	2014-19
M.A. Sociology, Rutgers, The State University of New Jersey, New Brunswick, NJ	2012-14
B.A. Sociology, University of Iowa, Iowa City, IA	2006-10

PUBLICATIONS

- Kramer, B. L., Korkmaz, G., Calderón, J.B.S., Robbins, C. & Keller, S. "International Collaboration in Open-Source Software: A Longitudinal Network Analysis of GitHub." Link: <https://github.com/uva-bi-sdad/oss-2020>
- Korkmaz, G., Robbins, C., Calderon, J.B.S., Kramer, B.L., Schroder, A., & Keller, S. "Measuring the Cost of Open-Source Software Innovation on GitHub." Link: <https://github.com/uva-bi-sdad/oss-2020>
- Kramer, B. L. & Lee, C. "The Rise of Diversity and Population Terminology in Biomedical Research." Link: <https://github.com/brandonleekramer/diversity>.
- Kramer, B. L. (2020). "The Molecularization of Race in Testosterone Research." *BioSocieties*. doi: <https://doi.org/10.1057/s41292-020-00200-w>.
- Kramer, B. L., Himmelstein, M. S., & Springer, K. W. (2017). "Getting to the Heart of Masculinity Stressors: Masculinity Threats Induce Pronounced Vagal Withdrawal During a Speaking Task." *Annals of Behavioral Medicine*, 51(6), 846-855. doi: <https://doi.org/10.1007/s12160-017-9907-z>.