

Sara Weston

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DATA SCIENTIST | QUANTITATIVE RESEARCH | ADVANCED ANALYTICS & BEHAVIORAL DATA

Behavioral scientist with 14+ years designing and evaluating interventions that change real-world behavior. 50+ peer-reviewed publications. Expertise in A/B testing, causal inference, and mixed-methods evaluation—identifying what works, for whom, and why. Research influenced federal health policy within 12 months.

WORK EXPERIENCE

University of Oregon

09/2024 – Present

Associate Professor of Psychology & Director of Graduate Studies

Eugene, OR

Improved doctoral program curriculum to facilitate student success in applying training to real-world problems while maintaining cross-functional buy-in.

- Built research operations infrastructure tracking 70+ students across milestones, reducing manual coordination and enabling proactive intervention within 1 year.
- Transformed stakeholder frustrations into actionable insights by initiating mixed-methods research (employee experience feedback and focus group interviews) and developing KPIs, leading to targeted program improvements within 6 months.
- Implemented a mentorship program for 13 early-career researchers, enhancing publication success and career development through structured feedback and performance reviews.
- Developed and delivered a statistics curriculum that improved student understanding of complex data, improving student performance and satisfaction as reflected in feedback surveys.
- Implemented proactive student tracking system with regular progress check-ins and newsletters, improving milestone completion rates and student satisfaction.
- Created engaging presentations that communicated research outcomes to non-technical audiences, enhancing understanding and driving user-centric decision-making across the organization.
- Facilitated decision-making and fostering collaboration across cross-functional teams by effectively communicating research findings via data-driven presentations.
- Own end-to-end lifecycle for employee surveys, including alumni and current student feedback mechanisms that adapt based on respondent attributes using advanced Qualtrics logic.
- Analyze quantitative and qualitative data from program surveys and employee feedback to generate actionable insights, identifying trends in student experience and recommending process improvements within 9 months.
- Build and maintain PowerBI dashboards to communicate findings to faculty leadership, tracking program KPIs for 70+ PhD students across multiple areas.
- Collaborate cross-functionally with faculty, administrators, and students to align surveys with organizational needs and translate feedback into strategic program changes.
- Design and deploy pulse surveys collecting peer feedback across 100 students in 25 teams, using Qualtrics piping and embedded data to customize question logic based on team composition.

Self-employed

01/2015 – Present

Consulting Data Scientist • Contractor

Remote

Deployed expertise in data and human behavior to serve clients including Stanford University, Washington University in St. Louis School of Medicine, and Google.

- Designed research infrastructure tracking 3,300+ families across 50+ survey waves; identified behavioral barriers to benefit uptake, informing Child Tax Credit policy recommendations within 12 months.

- Developed an unsupervised topic modeling pipeline (tidytext, stm) that analyzed 6,500+ responses, uncovering unexpected stakeholder pain points and influencing federal policy within 12 months.
- Created R Markdown dashboards that visualized key trends in complex survey data, leading to improved decision-making for stakeholders, impacting 50,000+ households within 1 year.
- Transformed complex survey data into actionable insights, collaborating with policymakers and non-profits, impacting 50,000+ households within 1 year.
- Developed segmentation models that identified distinct family risk profiles, revealing that a single "at-risk" designation masked meaningfully different groups requiring different intervention strategies.
- Increased the efficiency of codebase management by automating standard reporting processes and developing GitHub organization and repositories.
- Designed longitudinal survey methodology balancing statistical power requirements against participant burden, optimizing retention across 14 waves while maintaining measurement validity.
- Executed end-to-end survey operations for 50+ waves of nationally representative surveys, managing design, deployment, monitoring, and backend data extraction.
- Analyzed 6,500+ open-ended responses using NLP and topic modeling in R, surfacing emerging trends and translating qualitative data into actionable recommendations.
- Built automated data pipelines to optimize survey operations, enhancing scalability and reducing time-to-insight by standardizing extraction and analysis workflows.
- Delivered interactive dashboards enabling stakeholders to track trends in real time; findings directly informed U.S. Senate Finance Committee support for Child Tax Credit.

University of Oregon

01/2019 - 08/2024

Assistant Professor of Psychology & Primary Investigator • Full-time

Eugene, OR

Initiated people analytics research program, including end-to-end management of multiple projects simultaneously.

- Led the execution of multiple research projects, including survey design, employing custom scripting to streamline data analysis, and communication to stakeholders.
- Identified opportunities for curriculum enhancement by analyzing student feedback, leading to a 25% increase in course satisfaction ratings within 1 year.
- Managed multiple projects with collective \$250K annual research budget; secured \$1.5M+ in competitive NIH and foundation funding as PI.
- Utilized API integrations to analyze 700,000+ health community posts and uncovered distinct patient segments using network analysis, informing targeted health communication strategies.
- Developed a hands-on curriculum that enhanced non-technical audiences' application of complex statistical methods, improving understanding within 6 months.
- Transformed data quality processes by integrating automated checks, significantly reducing errors and enabling more reliable insights for strategic decision-making.
- Published methodological guidelines on data transparency and reproducibility adopted by major psychology journals, establishing standards for documentation and data quality in preexisting datasets.

Northwestern University

01/2017 - 01/2019

Postdoctoral Fellow, Medical Social Sciences

Evanston, IL

Led methodological coordination across 15 longitudinal datasets (49,000+ participants, 8+ international teams), resulting in three major findings that changed the perception of healthy personalities.

- Developed harmonization protocols ensuring comparable measures, designed analysis specifications that accounted for dataset-specific confounds, and synthesized heterogeneous findings into coherent conclusions.
- Architected reproducible R pipeline infrastructure enabling distributed analysts to run harmonized analyses independently; standardized outputs fed directly into automated aggregation and visualization.
- Deployed a scalable analysis pipeline utilizing R for data analysis and visualization, which streamlined reporting processes and facilitated decision-making across cross-functional teams.

- Diagnosed measurement problems in established research instruments; revealed widely-used vigilance constructs were actually two distinct psychological processes, fundamentally changing how the field approaches assessment.
- Implemented automated reporting processes that improved teamwork efficiency, increasing project completion rates by 400% within 12 months.
- Coordinated analysis of 15 longitudinal datasets (49,000+ individuals), developing reproducible R workflows for multi-source data integration.
- Collaborated with cross-disciplinary teams to translate complex statistical findings into actionable insights for healthcare researchers and program leaders.

Washington University in St. Louis
Graduate Fellow • Full-time

08/2012 – 05/2017
St. Louis, MO

- Designed and executed research projects examining personality-health connections using large national datasets (Health and Retirement Study); published 9 peer-reviewed articles.
- Developed dissertation methodology demonstrating that "body vigilance" measures conflated two distinct constructs (initial threat response vs. sustained monitoring)—resolving contradictory findings in the healthy neuroticism literature.
- Taught statistics and research methods to undergraduate students; managed team of undergraduate research assistants.
- Revamped data infrastructure, leading to a significant increase in data insights accuracy, which informed strategic initiatives within 12 months.
- Developed advanced Qualtrics surveys with custom scripting: piped respondent answers into subsequent questions, reduced researcher burden by 100+ hours through automation.
- Programmed complex survey logic including branching, display logic, and embedded data fields for multi-wave studies tracking 400+ participants over 4 years.
- Built and managed participant panels with automated email triggers and survey scheduling, ensuring high retention rates across longitudinal research studies.

EDUCATION

Ph.D. in Personality Psychology

Washington University in St. Louis

St. Louis, MO • 05/2017

B.A. in English & Psychology

Northwestern University

Evanston, IL • 06/2012

AWARDS & SCHOLARSHIPS

Tykeson Teaching Award

University of Oregon

05/2025

Rising Star Award

Association for Psychological Science

06/2021

Rising Star Award

Association for Research in Personality

06/2017

Secured and managed \$3.6M+ in multi-year applied research projects with cross-functional teams.

PUBLICATIONS

Identifying the number and labels of topics in structural topic modeling analyses: A tutorial.

05/2023

Advances in Methods and Practices in Psychological Science

Methods tutorial (cited 100+ times).

Mapping individual differences online: A case study of the Type 1 diabetes community. 10/2021

JMIR Diabetes

Large-scale social media text analysis.

Psychosocial factors associated with preventive pediatric care during the COVID-19 pandemic. 10/2021

Social Science & Medicine

ML for health behavior prediction; informed policy recommendations.

For a complete list of publications, see www.sarajweston.com.

SKILLS

API integrations, backend data extraction, census/pulse/lifecycle surveys, custom scripting), deployment, display logic, display logic, embedded data, embedded data, panels, panels, Qualtrics (advanced: piping, Qualtrics (advanced: piping, survey design, survey design

Data Visualization: data storytelling, Data Warehousing, ggplot2, Git, interactive dashboards, Power BI, Python, Qualtrics, reporting, R (tidyverse, brms, stm, tidytext), SQL, stm, Tableau, tidytext

Methodological expertise: A/B testing, Bayesian inference, causal inference, cohort analysis, data Science, experimental design, Experiments, Funnel analysis, heterogeneity/segmentation analysis, hypothesis development, interviews, longitudinal modeling, measurement frameworks, multilevel modeling, Prolific, psychometrics & scale development, survey design

Research Operations: cross-functional coordination, key metrics, leadership, mentorship, stakeholder management, translating data for non-technical audiences, workshop facilitation

Applied Analytics: A/B testing, NLP & topic modeling, predictive modeling, Qualtrics, survey design & optimization, survey platforms, usability testing

Artificial Intelligence: ChatGPT, Claude/Claude Code, Cursor, Gamma.app, Gemini, Notebook LM

Survey Operations: backend data extraction, census/pulse/lifecycle surveys, deployment, Qualtrics (advanced: piping, display logic, panels, embedded data, API integrations, custom scripting), survey design

Analytics & Programming: automation, data extraction, NLP, process improvement, Python, R (advanced), SQL, statistical analysis, topic modeling

Research Methods: A/B testing, psychometrics, qualitative research (focus groups, interviews, open-ended analysis), Survey methodology