

# 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 nonprofits, 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 scaleable 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](http://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, 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