Summary

I am a quantitative researcher and survey methodologist with over **10** years of experience specializing in data collection using emerging technologies and experimental methods to address substantive and methodological challenges. I apply advanced statistical modeling, experimental design, machine learning, and novel data sources to tackle complex business and societal issues.

- Quantitative Skills: Complex survey data analysis; Survey methodology; Longitudinal data analysis; Hierarchical linear modeling; Structural equation modeling; Machine learning; Causal inference; Experimental design
- Technical Skills: Python, R, Stata, Qualtrics

Education

- University of Michigan-Ann Arbor PhD, Survey and Data Science, April 2025 (GPA: 4.0/4.0) Award: National Science Foundation Doctoral Dissertation Research Improvement Grant (US\$ 20,000) [Link]
- RAND Graduate School PhD, Policy Analysis, 2016
- RAND Graduate School MS, Policy Analysis, 2014
- Iowa State University MS, Economics, 2009
- Mansfield University of Pennsylvania BS, Economics, 2008

Highlighted Research Projects

Addressing Survey Nonresponse and Attrition in Probability-Based Online Panels and Online Longitudinal Data Collections (Principal Investigator)

University of Michigan

2023-2025

- Led two randomized controlled trials (RCTs) and an observational study to examine survey nonresponse and attrition in probability-based online panels and online longitudinal data collections.
- **Designed and implemented two RCTs**: one with 2,000 new respondents from the Understanding America Study (UAS), a probability-based online panel representing U.S. adults aged 18 and older, and another with a random sample of 500 University of Michigan graduate students.
- **Collaborated** with the Rackham Graduate School and the UAS Research Team on survey design and RCT implementation.
- Secured \$20,000 in external funding from the National Science Foundation.
- Drafted and submitted three research papers to top-tier journals on methodological issues.

A Next Generation Data Infrastructure to Understand Disparities across the Life Course (Co-Investigator) University of Southern California 2020-2025

- Contributed to the development of an advanced data infrastructure to enhance social science research by enabling more accurate, granular, and comprehensive data collection on the daily lives of U.S. families and individuals.
- Administered pollution data collection with 900 respondents wearing Atmotube air quality monitors continuously for at least one year, capturing pollution and weather data at 1-minute intervals.
- Analyzed high-frequency pollution data to uncover patterns of pollution exposure using advanced statistical techniques.
- **Presented research findings** at leading academic conferences, including the Mobile Apps and Sensors in Surveys Conference and the American Association for Public Opinion Research Conference.
- Drafted research papers for submission to substantive and methodological journals.

Selected Experience

Research Associate, Center for Economic and Social Research

University of Southern California

Los Angeles, CA 2016 - Present

Ann Arbor, MI

Santa Monica, CA

2011-2015

2020-2024

- **Developed machine learning models** to detect response patterns in online panel surveys.
- Analyzed online survey data, electronic datasets, and high-frequency longitudinal data to support research projects.
- **Employed wearable technologies** to collect new population health data (<u>example</u>).
- **Prepared grant proposals** to secure funding for continued research initiatives.

Graduate Student Research Assistant, Institute for Social Research

University of Michigan

- Served as lead quantitative analyst for the five-year <u>American Family Health Study (AFHS)</u>, contributing to its impactful research on health and survey methodology.
- Developed machine learning models to predict undeliverable mail and optimize survey operations.
- Developed and optimized Stata code to analyze AFHS complex survey data.
- Presented AFHS study findings at multiple leading academic conferences.
- Coauthored and published five research papers in top-tier journals, including *Demography* and the *Journal of Survey Statistics and Methodology*.

Assistant Policy Analyst

RAND Corporation

- **Evaluated national and state-level policies** and shared findings with the public through reports and presentations (example).
- **Designed and implemented online surveys** for the Social Security Administration to improve data collection and policy evaluation.
- **Conducted extensive research on Social Security** to support policy development and enhance program functionality (<u>example</u>).

Selected Publications (ORCID: <u>https://orcid.org/0000-0001-7735-9837</u>)

- Saw, H.-W., Kapteyn, A., & Darling, J. (2024). Does Feedback from Physical Activity Measurement Devices Influence Physical Activity? Evidence from a Randomized Controlled Trial. Survey Research Methods. <u>https://ojs.ub.uni-konstanz.de/srm/article/view/8308</u>
- Saw, H.-W., Owens, V., Morales, S. A., Rodriguez, N., Kern, C., & Bach, R. L. (2023). Population mental health in Burma after 2021 military coup: online non-probability survey. *BJPsych Open*, 9(5), e156. <u>https://doi.org/10.1192/bjo.2023.550</u>
- Bruine de Bruin, W., Saw, H.-W., & Goldman, D. P. (2020). Political polarization in US residents' COVID-19 risk perceptions. *Journal of Risk and Uncertainty*, 61(2), 177-194. <u>https://doi.org/10.1007/s11166-020-09336-3</u>

Selected Manuscripts Under Review or In Preparation

- 1. Saw, H.-W., Kapteyn, A. Personality traits, panel tenure, survey topic, and context as predictors of survey nonresponse patterns in high-frequency online longitudinal surveys. Submitted to PLOS ONE.
- 2. Saw, H.-W., West, B. T. Evaluating the impact of three incentive schemes on survey nonresponse and attrition in online longitudinal panels. Submitted to Survey Research Methods.
- 3. Saw, H.-W., Angrisani, M., & Kapteyn, A. Analyzing the causal effect of survey frequency on nonresponse in probability-based online panels among new panel respondents. In preparation.