

Spencer Matthews

Department of Statistics,
University of California – Irvine,
Irvine, CA 92697

spencer.matthews@uci.edu
<https://srmatth.github.io>
(916) 960-7531

Education

- Ph.D. Statistics, University of California – Irvine, Expected June 2026
 - o Advisor: Dr. Bin Nan, Ph.D.
 - o Dissertation Title: Statistical Considerations for Healthspan-Focused Research
- M.S. Statistics, University of California – Irvine, December 2023
- B.S. Statistics, Brigham Young University, December 2020, *summa cum laude*
 - o Heritage Scholarship Recipient

Papers in Review

- **S. Matthews** & B. Nan. (2025). Regression for Left-Truncated and Right-Censored Data: A Semiparametric Sieve Likelihood Approach. *Statistics in Medicine*. Submitted.

Published Papers

- **S. Matthews** & B. Hartman. (2022). Machine Learning in Ratemaking, an Application in Commercial Auto Insurance. *Risks*, 10(4), 80.
- **S. Matthews** & B. Hartman. (2022). mSHAP: SHAP Values for Two-Part Models. *Risks*, 10(1), 3.

Presentations (* = refereed presentation)

- **S. Matthews** (presenter), B. Nan, D. Gillen, J. Grill & A. Saha. “The Golden Health Index and a New Statistical Framework for Studying Healthspan.” *2025 WNAR/IMS annual meeting*. Whistler, BC. 17 June 2025.
- ***S. Matthews**. “SAD Money: Using survival analysis divergence to evaluate and refine financial time series generation.” *ASA Symposium on Data Science & Statistics*. Salt Lake City, UT. 2 May 2025.
- **S. Matthews**. “mSHAP, Explaining Two-Part Models.” *24th International Insurance: Mathematics and Economics Conference*. Virtual Format. 8 July 2021.

Research Posters

- M. Herrera, M. Wencel, **S. Matthews**, N.A. Goyal, M. Dimachkie, T. Lloyd, P. Mohassel, C. Weihl, M. Freimer, A. Shaibani, M. Wicklund, S. Dixon, N. Chahin, L. Wang, P. Shieh, A. Amato, C. Quinn, O. Carbunar & T. Mozaffar. “Investigating Functional Differences in NT5c1A Seropositive and Seronegative IBM Participants in the INSPIRE-IBM Trail.” *Muscular Dystrophy Association Clinical & Scientific Conference*. Orlando, FL. March 2024.
- **S. Matthews**. “What kinds of Volleyball Partnerships are Successful?” *UConn Sports Analytics Symposium*. Virtual Format. September 2021.

Teaching Experience

- Course Instructor
 - o Introduction to Probability and Statistics, STATS 67, University of California – Irvine, Spring 2024

- Teaching Assistant
 - o Introduction to Probability and Statistics, STATS 120A, University of California – Irvine, Fall 2022
 - o Statistical Methods for Data Analysis III, STATS 112, University of California – Irvine, Spring 2022
 - o Basic Statistics, STATS 7, University of California – Irvine, Fall 2021 and Winter 2022
 - o Basic Statistics, STAT 121, Brigham Young University, Jan 2018 – May 2020
- Private Tutor
 - o Mostly for high-school students, courses including AP Statistics, Geometry, Calculus, Algebra 1 and 2

Mentoring

- Data @ UCI Undergrad Project Mentorship Program Mentor. Winter 2025.
- UCI Department of Statistics First-Year Mentor. 2024-2025.
- PALiSaDS (Pacific Alliance for Low-income Inclusion in Statistics and Data Science) Mentor. 2023-2024.
- Lumiere High School Research Program Mentor. Summer 2023.

Industry Experience

- Analytics and Innovation PhD Intern. United Airlines. Summer 2025. Chicago, IL.
- Graduate Data Science Intern. CliftonLarsonAllen, LLP. Summer 2024. Remote.
- Decision Science Intern. Bayer (Crop Science). Summer 2022 & 2023. Remote.
- Data Science Intern. CliftonLarsonAllen, LLP. January 2020 – September 2021. Remote.
- Statistical Consultant. NuSkin Corporation. August 2019 – June 2020. Provo, UT.

Awards/Honors

- **2025 UCI Grad Slam Finalist:** One of the ten best three-minute research pitches across all UCI graduate students
- **2022 Robert L. Newcomb Memorial Endowed Graduate Student Award:** Best overall score on first-year statistics qualifying exams at University of California - Irvine
- **2018 – 2020 Dean’s List:** Brigham Young University

Scientific Software

- **ltrc** R package for fitting semiparametric linear models to data that is both left-truncated and right-censored (on GitHub)
- **mshap** R package for computing SHAP values for two-part models quickly and efficiently in R (on CRAN)
- autonumeric family of functions in the **shinyWidgets** R package for creating aesthetically appealing and formatted numeric inputs in R shiny applications (on CRAN)

Certifications/Professional Development

- **SOA Associate of the Society of Actuaries (ASA)** – In Progress
 - o Exam P passed July 2024; 10
 - o Exam FM passed August 2024; 9
 - o Exam SRM passed September 2024; 10
 - o Exam PA taken October 2024; 9
- **UCI Accelerate 2 Industry (A2i) Professional Development Program** – Fall 2024

- **UCI Mentoring Excellence Program (MEP)** – Winter 2024

Professional Affiliations

- American Statistical Association (ASA)
- Society of Actuaries (SOA)
- International Biometrics Society (IBS) – Western North American Region

Languages

- English (Native)
- Spanish (Fluent)