Yiren Xu

PhD Candidate in Statistics
University of California, Irvine

yirenx@uci.edu   linkedin.com/in/yirenxu8   yirenx.github.io

Education

University of California, Irvine **PhD in Statistics**   Expected Jun. 2026
Advisor: Daniel L. Gillen
Dissertation: "Statistical methods for maximizing information for subgroup effects estimation"

University of California, Irvine **M.S. in Statistics**   Dec. 2023

University of California, Los Angeles **B.S. in Statistics**, Minor in English   Jun. 2021

Research Interests

Survival analysis, clinical trial design, efficient sampling designs, group sequential designs, Alzheimer's disease research, recruitment science

Publications

- **Xu Y.** & Gillen D. L. Increasing efficiency in case-cohort designs for recurrent events analysis. (*In preparation.*)
- **Xu Y.**, Grill J. D., & Gillen D. L. Case-cohort designs to improve efficiency for detecting effect modification. (*Under review*).
- Witbracht, M., **Xu, Y.**, Morgan, O. B., Salazar, C. R., Hoang, D., Kind, A., Gillen, D. L., & Grill, J. D. (2025). Research Attitudes Questionnaire scores and retention in a recruitment registry. *Journal of Alzheimer's Disease*, doi.org/10.1177/13872877241302422.

Research Experience

Department of Statistics, UCI

Graduate Student Researcher   Jul. 2022 – Present

Dissertation work:

- Develop efficient sampling designs in the Cox model in univariate and recurrent event settings for application in Alzheimer's disease biomarker research
- Implement simulations in R to demonstrate power and efficiency gains of these novel methods
- Develop group sequential methods in biomarker enriched clinical trial designs for subgroup effects estimation
- Present quarterly to faculty advisor and 10+ statistics students

Collaborative work with UCI Institute for Memory Impairments and Neurological Disorders (UCI MIND):

- Collaborate with researchers on removing barriers in AD research recruitment and retention
- Perform analysis in R on registry data using survival and logistic regression models, with visualizations using ggplot2
- Draft and edit manuscripts for peer-reviewed publications

Clinical Biometrics, Cytokinetics

Intern   Jun. – Sep. 2024

- Conducted simulations in R, JAGS, and rstan for future trial using Bayesian dynamic borrowing models with survival outcomes
- Evaluated power, type I error rate, and other operating characteristics to inform clinical trial design decisions, including planning an adaptive design with interim analyses

- Presented results and visualizations in team-wide and company-wide meetings with 200+ colleagues

Presentations & Talks

- Joint Statistical Meetings. Contributed talk *"Increasing efficiency in case-cohort designs for recurrent events analysis"*. (Nashville, TN, August 2025.)
- REMIND Emerging Scientists Symposium. Poster presentation *"Novel study designs towards precision medicine in Alzheimer's Disease research"*. (Irvine, CA, February 2025.)
- Western North American Region of the International Biometric Society. Presentation *"Case-cohort designs to improve efficiency for detecting effect modification"*. (Fort Collins, CO, June 2024.)
- UCI Steckler Center for Responsible, Ethical, and Accessible Technology (CREATE) Briefings. Presentation *"Representation in research: from recruitment to analysis"*. (Irvine, CA, May 2024.)
- REMIND Emerging Scientists Symposium 2023. Poster presentation *"Assessing renewal in a local recruitment registry"*. (Irvine, CA, April 2023.)
- UCI Statistical Methods and Applied Research Talks (SMART) Seminar Series (Irvine, CA, quarterly 2022-2025.)

Teaching

UCI Statistics, Basic Statistics

Teaching Assistant   Jan. – Jun., Oct. – Dec. 2022

- Communicated with instructional team in weekly meetings to facilitate course for 300+ students
- Held two-hour discussions and office hours weekly to ensure students received support on materials
- Collaborated on drafting students' materials and provided feedback to the instructor

Service

UCI Steckler Center for Responsible, Ethical, and Accessible Technology (CREATE)

Fellow, Graduate Researcher   Jan. 2023 – Present

- Presented research to 30+ computer science, informatics, and statistics faculty and graduate researchers

UCI Diverse Educational Community and Doctoral Experience (DECADE)

Department Mentorship Program Mentor   Oct. 2023 – Present

- Mentor two first-year graduate students with coursework, career, and logistic guidance

Student Representative   Oct. 2021 – Jun. 2023

- Assisted in hosting discussion between 20+ faculty and graduate students to promote academic exchange

Professional Membership

American Statistical Association
Phi Beta Kappa Honor Society