

Zayne Sember

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PROFILE

Self-starter Ph.D. candidate with expertise in gleaning insights from complex, real-world data and a passion for learning and applying new data science tools and methods. Experience in the academic, nonprofit, and government sectors demonstrating an ability to communicate complex topics to technical and non-technical audiences.

EDUCATION

Ph.D. Political Science with Specialization in Computational Social Science, Expected 10/2025,

University of California, San Diego

Dissertation - *Timely Talk: Responsive Legislator Communication*

- NLP of legislator communications paired with time series and cross-sectional data to analyze when and to what extent members of Congress are responsive to their constituents.

M.A. Political Science, 2022, *University of California, San Diego*

B.S. Computational Physics, 2020, *University at Buffalo, State University of New York*

B.A. Political Science, 2020, *University at Buffalo, State University of New York*

SKILLS

Programming: R (proficient in base and tidyverse), Python (proficient), SQL, Git, C++, Java, SPSS, Qualtrics |
Statistical Analysis: Causal inference, machine learning, natural language processing, time series analysis, survey experiments | **Research Design:** Observational and experimental, quantitative and qualitative methods |
Data Collection: Web-scraping, data merging and transformation

PROJECTS

speccurveR: Easy, Fast, and Pretty Specification Curve Analysis [↗](#)

R package, available on CRAN, for specification curve and model sensitivity analysis, see it in use here [↗](#)

SufjanViz [↗](#)

Interactive Shiny dashboard for analyzing the discography of Sufjan Stevens using track and lyric data

New Audience, New Message: Constituency Change and Responsive Legislator Communication [↗](#)

Working paper employing ML classification of congressional communications to measure legislator responsiveness

PROFESSIONAL EXPERIENCE

Private Tutor, *University of San Diego*

Tutoring a professor of communications in R and graduate statistics

2023 – present
San Diego, CA

Graduate Teaching Assistant, *University of California, San Diego*

Assist with teaching of substantive and technical undergraduate political science courses

2020 – present
San Diego, CA

Vice President and Board Member, *Science Demands Action*

Oversaw the transition from a grassroots advocacy group to a 501(c)(3) nonprofit organizing community events advocating for the use of science for social good

2017 – 2020
Buffalo, NY

Intern, *Office of Senator Charles Schumer*

2019
Buffalo, NY

Intern, *Erin Cole for Congress*

2018
Buffalo, NY

Intern, *Office of Lieutenant Governor Kathleen Hochul*

2017
Buffalo, NY

RESEARCH EXPERIENCE

University of California, San Diego, *Graduate Research Assistant*

Collecting, cleaning, and analyzing large datasets including congressional hearing transcripts, historical documents, and over 2M Google restaurant reviews

2022 – 2024

University at Buffalo, State University of New York, *Undergraduate Research Assistant*

2019 – 2020