

# Zayne Sember

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## PROFILE

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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

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**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

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**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

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**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

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**Private Tutor, University of San Diego**

Tutored a professor of communications in R and graduate statistics, research design

2023 – 2024  
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

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**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