

Chase Stokes

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I'm a mixed methods researcher specializing in data visualization; my work explores how best to combine written and visual information in both academic and applied settings. Through rigorous empirical experiment design and advanced statistical analyses, I develop actionable insights to empower teams to effectively communicate complex data.

EDUCATION

PHD IN INFORMATION SCIENCE | UNIVERSITY OF CALIFORNIA BERKELEY 2021 – [est.] Aug 2025.

Dissertation: Combining Text and Visuals for Effective Data Communication

Advisor: Professor Marti Hearst

Relevant Coursework: User Experience Research, Information Visualization and Presentation, Experiments and Causal Inference, Computational Social Science, Applied Natural Language Processing, Generative AI

NORTHWESTERN UNIVERSITY 2017 - 2021

B.A. in Psychology and Gender Studies | GPA: 3.9/4.0, Magna Cum Laude, Dean's List all quarters

Advisor: Professor Steven Franconeri

WORK

UNIVERSITY OF CALIFORNIA BERKELEY | Berkeley, CA 2021- Present

Graduate Student Researcher

- Designed and executed 3 pre-registered crowdsourced studies with 1,600+ participants; applied advanced statistical analysis; delivered actionable design recommendations for data storytelling
- Conducted 2 semi-structured interview studies with 39 visualization designers; evaluated written interventions for visualization design; proposed recommendations for user-centered design practices
- Published and led 6 peer-reviewed papers; presented novel research at top-tier academic conferences, disseminating critical research findings for visualization design
- Directed 5 research teams and mentored 4 undergraduate and graduate students to develop and conduct innovative research at the forefront of data communication

BECISE PRESENTATIONS | Chicago, IL Summer 2025

Applied AI Solutions Intern

- Built a 6-class image classification pipeline using a multi-stage random forest approach, boosting accuracy from 74% to 88% by combining one-vs-rest binary classifiers with a base multi-class model
- Developed a rule-based algorithm to size charts and tables by factoring in text content and fixed layout bounds, ensuring clear data presentation from images
- Designed a multi-agent chained workflow with Azure OpenAI and Google Apps Script for progressive summarization, structured output generation, and semantic interpretation of semi-structured text content

TABLEAU RESEARCH AT SALESFORCE | Palo Alto, CA Summer 2023

PhD Research Intern

- Spearheaded 2 crowdsourced studies with 800+ participants; synthesized recommendations for use of multimodal data representations grounded in practical decision-making
- Engineered and evaluated 2 interactive prototypes for multimodal data presentation; conducted user studies with 20 participants; developed recommendations for use of speech and animation in data communication
- Filed patent pending for innovative data presentation technology incorporating text, visualization, and speech information to support decision-making under uncertainty
- Published 3 papers in peer-reviewed journals; delivered impactful presentations to senior research leadership to inform multimodal features

UNIVERSITY OF CALIFORNIA BERKELEY | Berkeley, CA Spring 2023

Graduate Student Instructor

- Developed and instructed 14 educational modules for visualization tools, including Tableau, d3.js, Observable Plot, and Figma; improved student ability in code and no-code environments
- Created hands-on coding exercises and tutorials for web-based data visualization; equipped students with practical skills to create interactive visualizations with industry-standard tools
- Led 2 graduate-level lectures as interim professor; delivered advanced content on misleading visualization techniques and perceptual foundations for visualization design guidelines

SELECT PUBLICATIONS

- Stokes, C.,** Hu, C., & Hearst, M.A. (2024). "It's a Good Idea to Put It Into Words": Writing 'Rudders' in the Initial Stages of Visualization Design. *IEEE Transactions on Visualization and Computer Graphics*. 1-11.
<https://doi.org/10.1109/TVCG.2024.3456324>
- Stokes, C.,** Sanker, C., Cogley, B., & Setlur, V. (2024). Mixing Modes: Active and Passive Integration of Speech, Text, and Visualization for Communicating Data Uncertainty. *Computer Graphics Forum*.
<https://doi.org/10.2312/evs.20241072>
- Stokes, C.,** Setlur, V., Cogley, B., Satyanarayan, A., & Hearst, M.A. (2022). Striking a Balance: Reader Takeaways and Preferences when Integrating Text and Charts. *IEEE Transactions on Visualization and Computer Graphics*, 29(1), 493-503. <https://doi.org/10.1109/TVCG.2022.3209405>

FELLOWSHIPS AND INVOLVEMENT

NATIONAL SCIENCE FOUNDATION	2023 - present
<i>National Science Foundation Graduate Research Program Fellowship Recipient</i>	
FORD FOUNDATION	2023
<i>Ford Foundation Predoctoral Fellowship Honorable Mention</i>	
APPLICANT FEEDBACK PROGRAM	2022 - present
<i>Coordinator; organized 20 PhD student volunteers to provide unique feedback to 60+ prospective applicants</i>	

SKILLS

Programming and Design: R, Python, D3.js, Figma, Tableau, JavaScript, HTML/CSS, Observable Plot, Crew.AI, RAG techniques for AI, Azure OpenAI, Google Apps Script, machine learning, agentic AI

Research: Experiment design, advanced statistical analysis, semi-structure interviewing, team management, mentorship, prototyping, user testing, cross-team collaboration, multi-level modeling

Interests: Reading, craft beer, baseball, and hiking