

Kylie R. Lin

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Doctoral Student, Human-Centered Computing
School of Interactive Computing, Georgia Institute of Technology

Research Interests: Information Visualization, Human Cognition, Trust in Automated Systems, Decision Making.

Education

Georgia Institute of Technology Ph.D. in Human-Centered Computing Advisor: Cindy Xiong Bearfield GPA: 4.0 / 4.0	Atlanta, GA 2023 – Present
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Northwestern University B.S. in Communication Studies & Cognitive Science <i>Data Science minor Digital Media module</i> Advisors: David Rapp, Steven Franconeri magna cum laude, SoC Dean's List (all eligible terms) Lambda Pi Eta Honor Society GPA: 3.98 / 4.0	Evanston, IL 2019 – 2023
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Research Experience

Georgia Institute of Technology Graduate Student Researcher VisualizaXiong Lab Advisor: Cindy Xiong Bearfield Studying 1) how visual design choices impact people's perception of static data visualizations and 2) metrics to assess people's trust in automated systems.	Atlanta, GA 2023 – Present
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Toyota Research Institute Applied Behavioral Science Research Intern Human-Centered AI team Advisor: Laura Libby Conducted research on vehicle owners' perceptions of electric vehicle battery degradation, identifying methods to mitigate misunderstanding.	Los Altos, CA Summer 2024
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Northwestern University Student Researcher Reading Comprehension Lab Advisor: David Rapp Conducted an honors thesis on the impact of visual complexity on people's comprehension of data visualizations and their confidence in their comprehension.	Evanston, IL 2022 – 2023
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Research Assistant | Visual Thinking Lab

2020 – 2023

Advisor: Steven Franconeri

Conducted research at the intersection of human cognition and data visualization. Co-authored a paper on chart alignment impacting human comparisons to IEEE TVCG.

Research Assistant | Social Media Lab

Spring 2021

Advisor: Jeremy Birnholtz

Developed a codebook for qualitative survey data using data-driven open coding for a project on the disclosure of sensitive information online by LGBTQ+ individuals.

SiriusXM

Oakland, CA

User Experience Research Intern | Automotive Experience Design Team

Summer 2022

Manager: Katie Bessière

Developed a standard framework for competitive benchmarking research. Successfully executed benchmarking studies: Handled the recruitment and live interviewing of 12 participants via UserTesting software.

International Visiting and Development

Training Forum on Artificial and Human Intelligence

Schloss Dagstuhl, Germany

Host: Mehul Bhatt

Fall 2024

Presented an in-progress research project exploring the potential of visualization design features to model perceived visual complexity.

Publications and Presentations

Publications

Lin, K., Li, J., Sparks, J., Filipowicz, A., Shamma, D., & Libby, L. [In Submission] SOH Illusion: Misunderstandings of EV Battery State of Health and Methods to Promote Understanding. *IEEE Transactions on Visualization and Computer Graphics*.

Wang, H. W., Cohen, A., Nobre, C., **Lin, K.**, Zwald, Z., Kennedy, R., & Xiong Bearfield, C. [In Submission] Do You “Trust” This Visualization? Identifying Representative Survey Items for Trust Elicitation. *IEEE Transactions on Visualization and Computer Graphics*.

Stokes, C., **Lin, K.**, & Xiong Bearfield, C. [In Submission] Insights and Oversights: Comparing Human and LLM Responses to Data Visualizations. *IEEE Transactions on Visualization and Computer Graphics*.

Lin, K., Guan, H., Ru, S., Rapp, D. N., & Xiong Bearfield, C. [In Submission]
Is More Always Better? Quantifying Visual Complexity with Visualization Design Features.
IEEE Transactions on Visualization and Computer Graphics.

Xiong, C., Setlur, V., Bach, B., **Lin, K.**, Koh, E., Franconeri, S. (2021). Visual Arrangements of Bar Charts Influence Comparisons in Viewer Takeaways. *IEEE Transactions on Visualization and Computer Graphics (TVCG)*.

Posters

Lin, K., Ru, S., Rapp, D., Guan, H., Bearfield, C. X. (2024, October). What Makes a Visualization Complex? Exploring Design Features Related to Visual Complexity. [Poster session]. *IEEE Visualization and Visual Analytics Conference*.

Lin, K., Rapp, D., Xiong, C. (2023, November). Does Visual Complexity Impact Reader Comprehension and Confidence of Data Visualizations? [Poster session]. *Psychonomic Society*.

Awad, M. F., **Lin, K.**, & Franconeri, S. L. (2023). Mixed Graph Designs Do Not Improve Visual Memory. *Journal of Vision*, 23(9), 5781-5781.

Lin, K., Rapp, D., Xiong, C. (2023, May). The Effect of Visual Complexity on Confidence and Comprehension in Visualization Experiences. [Poster session]. *Northwestern Cog Sci Fest, Evanston, IL*.

Awad, M., **Lin, K.**, & Franconeri, S. (2022). Does using a diversity of graph types help your audience remember your data?. *Journal of Vision*, 22(14), 4279-4279.

Lin, K., Xiong, C., Rapp, D. (2022, May). Attempts to Augment Refutation Text Benefits with Visualizations. [Poster session]. *Northwestern Undergraduate Research & Arts Exposition*.

Lin, K., Awad, M.F., Franconeri, S. (2022, May). The Effects of Visual Diversity in Series of Charts. [Poster session]. *Northwestern Cog Sci Fest, Evanston, IL*.

Presentations

Lin, K., Ru, S., Rapp, D., Guan, H., Bearfield, C. X. (2024, October). Quantifying Perceptions of Visual Complexity with Data Visualization Design Features. *Artificial and Human Intelligence, Schloss Dagstuhl, Germany*.

Professional Experience

Just One Cookbook

Belmont, CA
2021-2022

Operations Analyst Managers: Shen Chen, Namiko Chen Co-coordinated the launch of an online subscription membership program (JOC Plus) by designing site pages, advertisements, and by helping facilitate a soft launch.	2020–2021
Digital Media Intern Managers: Shen Chen, Namiko Chen Conducted research on global site traffic using R/RStudio and Google Search Console.	
North by Northwestern Graphics Editor & Social Media Graphics Coordinator Taught weekly design lessons covering design principles, Adobe CC basics, accessibility design, 3D graphics, and more to undergraduate students.	Evanston, IL 2020–2021
Paravane Ventures Market Research & Strategy Case Analyst Analyzed the UX/UI and website of the company Product Alliance and the online market for product management courses.	Remote Summer 2020
Northwestern-Medill Journalism Institute Student Journalist Residency for U.S. and international students. Included writing, video production, ethics, and digital media.	Evanston, IL Summer 2018

Professional Services

Reviewer ACM Conference on Human Factors in Computing Systems (CHI)	2024
ACM Creativity and Cognition	2021

Fellowships and Awards

Departmental Excellence Award for Undergraduate Students Northwestern Department of Communication Studies	2023
MinneAnalytics Scholarship, \$500 MinneAnalytics	2022
2nd Place, Women in Data Science Datathon, Chicago	2022

Summer Undergraduate Research Fellowship, \$3500 Northwestern Department of Cognitive Science	2021
Summer Undergraduate Research Grant, \$3500 (awarded but declined) Northwestern Office of Undergraduate Research	2021
1st Place, Northwestern Data Visualization Contest Northwestern Department of Statistics and Data Science <i>Interactive global map depicting the number of COVID-19 cases over time using RShiny. Submission published to university archives, see here.</i>	2021
Finalist, McCormick Design-a-Thon Northwestern McCormick School of Engineering <i>Conducted market research and created a wireframe for an app promoting safe social interactions for university students in the time of COVID-19.</i>	2020
Clara Tao Memorial Scholarship, \$1000	2019
National Merit Commended Scholar National Merit Scholarship Corporation	2017

Teaching Experience

Northwestern University

Teaching Assistant

Data Science Project	Spring 2023
Data Visualization	2022 - 2023
Persuasive Images: Rhetoric in Popular Culture	Winter 2021

Peer Mentor

Communication and Technology	Fall 2021
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Skills

Human-Subjects Research

- Survey studies: Qualtrics, Prolific, Amazon Mechanical Turk
- Eye tracking studies: EyeLink 1000 eye tracker

Qualitative data analysis

- data-driven open coding
- semi-structured interviewing

Quantitative data analysis

- R/RStudio/RShiny
- Python (pandas, sci-kit learn, Jupyter Notebooks)

Programming

- Python
- HTML/CSS
- Processing
- Arduino
- C/C++

Data Visualization

- Javascript (Vanilla, D3.js), Python (matplotlib, seaborn), R (ggplot2)
- Tableau

Design

- Adobe Creative Suite: Photoshop, Illustrator, Premiere, After Effects, Dimension, XD
- Microsoft 365: Excel, Powerpoint, Word
- Google Workspace: Drive, Sheets, Docs, Slides, Colab
- Figma
- Miro

Relevant Coursework

Georgia Institute of Technology

Human-Computer Interaction

- Principles of Data Visualization (CS 6730)
- Information Visualization (CS 7450)
- Human-Centered Data Analysis (CS 7451)
- Prototyping Interactive Systems (CS 6452)

Social Computing

- Design of Online Communities (CS 6470)

Northwestern University

Data Science & Visualization

- Data Science I-III (STAT 301-1, 301-2, 301-3)
- Data Visualization (STAT 302)
- Information Visualization (COMM ST 395)

Programming

- Fundamentals of Computer Programming I-II (CS 111, CS 211)
- Introduction to Artificial Intelligence (CS 348)
- Introduction to Cognitive Modeling (COG SCI 207)

Research Methods

- Evaluating Evidence (COG SCI 202)
- Cognitive Science Proseminar (COG SCI 366)
- Research Seminar (Hazards of Computing) (COMM ST 394)
- Presenting Ideas and Data (COG SCI 345)

