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, Research Methods Comparison.

Education

Georgia Institute of Technology **Atlanta, GA**
Ph.D. in Human-Centered Computing 2023 – Present
Advisor: Cindy Xiong Bearfield
GPA: 4.0 / 4.0

Northwestern University **Evanston, IL**
B.S. in Communication Studies & Cognitive Science 2019 – 2023
Data Science minor | Digital Media module
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

Research Experience

Georgia Institute of Technology **Atlanta, GA**
Graduate Student Researcher | VisualizaXiong Lab 2023 – Present
Advisor: Cindy Xiong Bearfield

Studying how design choices impact people's perception of data visualizations and metrics to assess people's trust in automated systems.

Toyota Research Institute **Los Altos, CA**
Applied Behavioral Science Research Intern | Human-Centered AI team Summer 2024
Advisor: Laura Libby

Conducted research on vehicle owners' perceptions of electric vehicle battery degradation, identifying methods to mitigate misunderstanding.

Northwestern University **Evanston, IL**
Student Researcher | Reading Comprehension Lab 2022 – 2023
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.

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 how young people disclose sensitive health information online.

SiriusXM **Oakland, CA**
User Experience Research Intern | Automotive Experience Design Team Summer 2022
Manager: Katie Bessière

Developed a 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

Wang, H. W., Cohen, A., Nobre, C., **Lin. K.,** Zwald, Z., Kennedy, R., & Xiong Bearfield, C. [In Submission] Do You "Trust" This Visualization? An Inventory to Measure Trust in Visualizations. *IEEE Transactions on Visualization and Computer Graphics.*

Lin, K., Li, J., Sparks, J., Filipowicz, A., Shamma, D., & Libby, L. (2025). SOH Illusion: Misunderstandings of EV Battery State of Health and Methods to Promote Understanding. In *Proceedings of the 17th International Conference on Automotive User Interfaces and Interactive Vehicular Applications.*

Lin. K., Stokes, C. & Xiong Bearfield, C. (2025). Write, Rank, or Rate: Comparing Methods for Studying Visualization Affordances. *IEEE Transactions on Visualization and Computer Graphics.*

Lin, K., Ru, S. S., Rapp, D. N., Guan, H. & Xiong Bearfield, C. (2025).
What Makes a Visualization Visually Complex? In *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '25). April 26–May 01, 2025, Yokohama, Japan. ACM, New York, NY, USA, 7 pages. https://doi.org/10.1145/3706599.3719983*

Lin. K., Stokes, C. & Xiong Bearfield, C. (2025). LLMs Are Not Reliable Human Proxies to Study Affordances in Data Visualizations. *2nd HEAL Workshop at CHI Conference on Human Factors in Computing Systems (HEAL @ CHI 2025). April 26, 2025, Yokohama, Japan.*

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.*

Posters

Lin, K., Ru, S., Rapp, D., Guan, H., Bearfield, C. X. (October 2024). 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. (November 2023). 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. (May 2022). Attempts to Augment Refutation Text Benefits with Visualizations. [Poster session]. *Northwestern Undergraduate Research & Arts Exposition.*

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

Presentations

Lin, K. (2025, May). Conceptualizing Visual Complexity and Trust in Data Visualizations. *CODA AI Synapse, Atlanta, Georgia, USA.*

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 Daghstul, Germany.*

Professional Experience

Just One Cookbook — **Belmont, CA**

Operations Analyst — 2021–2022

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.

Digital Media Intern — 2020–2021

Managers: Shen Chen, Namiko Chen

Conducted research on global site traffic using R/RStudio and Google Search Console.

North by Northwestern — **Evanston, IL**

Graphics Editor & Social Media Graphics Coordinator — 2020–2021

Taught weekly design lessons covering design principles, Adobe CC basics, accessibility design, 3D graphics, and more to undergraduate students.

Paravane Ventures — **Remote**

Market Research & Strategy Case Analyst — Summer 2020

Analyzed the UX/UI and website of the company Product Alliance and the online market for product management courses.

Northwestern-Medill Journalism Institute — **Evanston, IL**

Student Journalist — Summer 2018

Residency for U.S. and international students. Included writing, video production, ethics, and digital media.

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 2023
Northwestern Department of Communication Studies

MinneAnalytics Scholarship, $500 2022
MinneAnalytics

2nd Place, Women in Data Science Datathon, Chicago 2022

Summer Undergraduate Research Fellowship, $3500 2021
Northwestern Department of Cognitive Science

Summer Undergraduate Research Grant, $3500 (awarded but declined) 2021
Northwestern Office of Undergraduate Research

1st Place, Northwestern Data Visualization Contest 2021
Northwestern Department of Statistics and Data Science
Interactive global map depicting the number of COVID-19 cases over time using RShiny. Submission published to university archives, see here.

Finalist, McCormick Design-a-Thon 2020
Northwestern McCormick School of Engineering
Conducted market research and created a wireframe for an app promoting safe social interactions for university students in the time of COVID-19.

Clara Tao Memorial Scholarship, $1000 2019

National Merit Commended Scholar 2017
National Merit Scholarship Corporation

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

Skills

Human-Subjects Research

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

Qualitative data analysis

- Thematic 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)