

Brianna Wimer

EDUCATION

University of Notre Dame, Notre Dame, IN August 2021 - PRESENT
Ph.D. in Computer Science and Engineering
Advised by Dr. Ronald Metoyer, Dr. Jennifer Mankoff (UW)

University of Notre Dame, Notre Dame, IN December 2025
M.S in Computer Science and Engineering

The University of Alabama, Tuscaloosa, AL July 2021
B.S in Computer Science

RESEARCH INTERESTS

My research focuses on making visual and diagrammatic representations (e.g., flowcharts, data structures, and charts) meaningfully accessible to people with disabilities. I design and evaluate accessible representations in partnership with disability communities and build interactive tools that enable educators to create and share inclusive learning materials. **Through this work, my goal is to close the educational gaps created by inaccessible visual content, particularly in higher education, by ensuring that diagrams can be both effectively authored and meaningfully understood by all learners.**

PUBLICATIONS

Wimer, B.*, Kanchi, R.*, Frierson, K., Potluri, V., Metoyer, R., Mankoff, J., Natsuhara, M., Wang, M. "Nonvisual Support for Understanding and Reasoning about Data Structures." *Proceedings of the CHI Conference on Human Factors in Computing Systems*. 2026.

Glazko, K., Cha, J., Lewis, A., Kosa, B., **Wimer, B.**, Zheng, A., Zheng, R., Mankoff, J. "Autoethnographic Insights from Neurodivergent GAI "Power Users." *Proceedings of the CHI Conference on Human Factors in Computing Systems*. 2025.

Wimer, B., Mack, KA., Metoyer, R., and Mankoff, J. "Accessible Flowcharts: A Feasibility Study with BVI Participants." *The Journal on Technology and Persons with Disabilities* (2025): 317.

Wimer, B., Szymanski, A., Metoyer, R. "Beyond Static Labels: Unpacking Nutrition Comprehension in the Digital Age." *Proceedings of the CHI Conference on Human Factors in Computing Systems*. 2024.

Szymanski, A., **Wimer, B.**, Anuyah, O., Eicher-Miller, H. A., & Metoyer, R. A. "Integrating Expertise in LLMs: Crafting a Customized Nutrition Assistant with Refined Template Instructions." *Proceedings of the CHI Conference on Human Factors in Computing Systems*. 2024.

Ning, Z., **Wimer, B.**, Jiang, K., Chen, K., Ban, J., Tian, Y., Zhao, Y., Li, T. "SPICA: Interactive Video Content Exploration through Augmented Audio Descriptions for Blind or Low-Vision Viewers." *Proceedings of the CHI Conference on Human Factors in Computing Systems*. 2024.

Wimer, B., South, L, K. Wu, D. A. Szafir, M. A. Borkin and R. Metoyer, "Beyond Vision Impairments: Redefining the Scope of Accessible Data Representations." *IEEE Transactions on Visualization and Computer Graphics* (2024).

Dillahunt, T., Sawwan, M., Wood, D., **Wimer, B.**, Conrado, A., Eicher-Miller, H., Zornig Gora, A., Metoyer, R. "Understanding Food Planning Strategies of Food Insecure Populations: Implications for Food-Agentic Technologies." *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. 2023.

AWARDS & ACHIEVEMENTS

Gemini Academic Program Award (\$10,000), Google | 2025
Graduate Fellowship Award, Washington NASA Space Grant Consortium | 2024
Google Ph.D. Fellowship, Google | 2023
IEEE VIS Inclusivity & Diversity Scholarship, IEEE VIS | 2023
Graduate Cohort for IDEALS Travel Grant, Computing Research Association | 2023
SIGACCESS Travel Scholarship, ACM SIGACCESS | 2022
Graduate Cohort for IDEALS Travel Grant, Computing Research Association | 2022
Jack and Mary Ann Remick Fellowship, University of Notre Dame | 2021
Louis Stokes Alliance for Minority Participation Scholar, University of Alabama | 2018 -2021
Dean's List, The University of Alabama | 2021, 2020
Tapia Travel Grant, AccessComputing | 2020
Grace Hopper Travel Grant, AccessComputing | 2020

RESEARCH EXPERIENCES

Visiting Student Researcher, The University of Washington Fall 2023 - PRESENT
Advisor: Dr. Jennifer Mankoff

Graduate Research Assistant, The University of Notre Dame Fall 2021 - PRESENT
Advisor: Dr. Ronald Metoyer

CRA-WP Distributed Research for Undergraduates (DREU) Summer 2021
Research Intern, University of Notre Dame; Advised by Dr. Ronald Metoyer

CRA-WP Distributed Research for Undergraduates (DREU) Summer 2020
Research Intern, Tufts University; Advised by Dr. Elaine Short

Undergraduate Research Assistant, The University of Alabama 2019 to 2021
Advisor: Dr. Chris Crawford

POSTERS & WORKSHOP PAPERS

Wimer, B. *Bridging Chart Extraction and Accessibility in Data Visualization*. Workshop Paper accepted and presented at 2nd Workshop on Accessible Data Visualization at IEEE VIS 2025. Vienna, Austria.

Wimer, B. *Understanding How Information Visualization Can Support Diverse Cognitive Abilities.* Poster Presented At: ACM Conference on Computers and Accessibility. 2022 Oct 24-26. Athens, Greece. (Not peer-reviewed, poster presentation for SIGACCESS Travel Scholarship).

Wimer, B., Szymanski, A. Food Information Networks (FINs): The Visual Representation of Food Information for Healthy Dietary Choices. Poster Presented At: Lucy Institute Fall Symposium. 2021 Oct 27. University of Notre Dame.

Wimer, B. *Improving Self-Efficacy in Emotion Regulation Through a Biofeedback Video Game.* Poster Presented At: Virtual Grace Hopper Celebration. 2020 Sept 29-Oct 3. Remote

TEACHING EXPERIENCE

University of Notre Dame

2023 **Warrior-Scholar Project Camp For Veterans and Active Duty Service Members**
Role: Instructor / Research Project Leader

2022 **Fundamentals of Computing (CSE20311)**
61 Undergraduate students enrolled. Role: Graduate Teaching Assistant

2021 **Academic Services for Student Athletes**
2 Undergraduate students assigned to me. Role: Strategy Tutor

2021 **Academic Services for Student Athletes**
12 Undergraduate students assigned to me. Role: Calculus Tutor

INVITED TALKS

2024 **Guest Speaker,** Accessibility Lunch at Carnegie Mellon University

2023 **Panelist,** Inclusive Design x The Alliance for Identity-Inclusive Computing Education

2021 **Panelist,** Code.Org x CareerVillage
Panelist, Explore STEM@UTSA

2020 **Guest Speaker,** Louis Stokes Alliance for Minority Participation
Guest Speaker, Bridge to Engineering Success at Tufts Webinar

ACADEMIC SERVICE

Professional Service

2025 **Lead Organizer:** Accessible Visualization Workshop at IEEE VIS'25

2024 **Publication Reviewer:** UIST, DIS

2022 **Student Volunteer:** CHI, DIS, ASSETS

University and Community Service

2025 **Research Mentor,** Department of Services for the Blind Yes2 Program

2024 **Graduate Leader,** UW NASA Space Grant Consortium

2023 **Summer Program Co-Director**, ND CSE Summer Enrichment Program
Counselor/Mentor, UA's LEGACY Project

2022 **Graduate Research Mentor**, ND's Center for Civic Innovation Interns
Graduate Research Mentor, ND's iTREDS Program

2020 **Research Mentor**, UA's Louis Stokes Alliance for Minority Participation

2019 **Counselor/Mentor**, UA's LEGACY Project
Counselor, UA's NeuroCamp

NEWS MEDIA COVERAGE

2023 **ND Engineering News.** ["Brianna Lynn Wimer named 2023 Google Ph.D. Fellow to address computing needs of vision-impaired people"](#)

2021 **AccessComputing STEM For All Video Showcase.**

2020 **AccessComputing Newsletter Profile.** ["Distributed Research Experience for Undergraduates \(DREU\): Firsthand Benefits"](#)

2019 **UA Engineering News.** ["LEGACY program prepares young women of color with computer science education"](#)