Lily Houtman

cartographer and critical geographer

portfolio: lilyhoutman.github.io
email: lhoutman@psu.edu
pronouns: they/them

RESEARCH INTERESTS

mobile/web mapping, user-centered design, spatial data science, critical theory, open-source technology

EDUCATION

The Pennsylvania State University 2024-present
Ph.D. Geography Expected Graduation: Spring 2027
Advisor: Anthony C. Robinson
Committee: Cynthia Brewer (Geography/Information Sciences and Technology)
Mark Ortiz (Geography)
Pamela VanHaitsma (Communication Arts and Sciences)
Dissertation: *Evaluating the Production and Use of Mobile and Responsive Thematic Maps* (Forthcoming)

The Pennsylvania State University 2022-2024
M.S. Geography
Advisor: Anthony C. Robinson
Committee: Cynthia Brewer (Geography/Information Sciences and Technology)
Helen Greatrex (Geography/Statistics)
Thesis: *Mobile Thematic Map Design in Data Journalism: An Evaluation of Techniques, Challenges, and Opportunities*

University of Wisconsin – Madison 2018-2022
B.S. Cartography and GIS (Honors)
Advisor: Robert E. Roth
Thesis: *Mapping Presidential Elections: An Empirical Analysis of Effective Design Techniques*
Additional Degrees: B.S. Geography + B.S. Anthropology + Certificate in Archaeology

PROFESSIONAL and RESEARCH EXPERIENCE

Graduate Researcher – Mapping the Fracking Industry in Western PA 2025-present
The Pennsylvania State University, Department of Geography
PI: Dr. Jennifer Baka, Associate Professor of Geography

Graduate Researcher – Designing Non-Binary Maps to Reimagine Borderlands 2024-present
The Pennsylvania State University, Department of Geography
PI: Dr. Melissa W. Wright, Professor of Women's, Gender, and Sexuality Studies/Geography

Graduate Student Cartographer – The GeoGraphics Lab 2023-present
The Pennsylvania State University, Department of Geography
Creative Director: Dr. Alicia Iverson

Student Researcher – *Mapping for a Sustainable World*: QGIS Technical Supplement 2021-present
University of Wisconsin – Madison Cartography Lab, Department of Geography
PI: Dr. Robert E. Roth, Professor of Geography

Graduate Research Assistant – Beescape NexGen Geovisualization Tool 2022-2025
The Pennsylvania State University, Departments of Geography and Entomology
PI: Dr. Christina Grozinger, Professor of Entomology
Co-PI: Dr. Anthony C. Robinson, Professor of Geography

Graduate Student Cartographer – Harm Mapping: Visualizing Sexual Harassment 2022-2024
The Pennsylvania State University and Lafayette College
PI: Dr. Dana Cuomo, Associate Professor of Women's, Gender, and Sexuality Studies

Web Development Intern 2021-2022
United States Geological Survey, Web Mapping and Informatics Team

Undergraduate Student Cartographer – The UW–Madison Cartography Lab 2020-2022
University of Wisconsin – Madison, Department of Geography
Creative Director: Tanya Anderson

PEER-REVIEWED PUBLICATIONS

Wright, MW and **L Houtman**. *in revision*. Unmapping binaries in the México-US borderlands: A queer cartographic collaboration. *ACME: An International Journal for Critical Geographies.*

Li, K., H Grab, M Buckner, **L Houtman**, M Kammerer., D McLaughlin, ... & CM Grozinger. 2026. Beescape and BeeSpatial: Making multi-scale environmental indicators of bee habitat accessible across audiences. *Environmental and Sustainability Indicators*, 101381.

Roth, RE, A Iverson, A Kagawa, G Le Sourd, B Ricker, T Andersen, G Baldrica-Franklin, **L Houtman**, F Ilunga, M Lee, M-J Kraak. 2025. Making and remaking Mapping for a Sustainable World: a retrospective and prospective analysis as a case study in Processual Cartography. *International Journal of Cartography, 11(3),* p. 388-427.

Houtman, L, AC Robinson, D McLaughlin, and C Grozinger. 2025. Evaluating the Usability and Utility of a Spatial Decision Support System for Pollinator Ecology. *Ecological Informatics, 89,* p. 103182.

Houtman, L. 2025. Techniques, Challenges, and Opportunities in Mobile Thematic Map Design for Data Journalism. *Cartography and Geographic Information Science, 53(1),* p. 18-37.

Houtman, L, D Cuomo, M Dennehy, M Forman, A Zea, and S Hannan. 2025. The Harm Mapping Project: Navigating Ethics and Collaboration in Map Design. *Cartographic Perspectives*, *105,* p. 27-33.

Song Z, RE Roth, **L Houtman**, T Prestby, A Iverson, and S Gao. 2023. Visual storytelling with maps: An empirical study on story map themes and narrative elements, visual storytelling genres and tropes, and individual audience differences. *Cartographic Perspectives, 100,* pp. 10-44.

BOOKS and TUTORIALS

Houtman L, G Baldrica-Franklin, and RE Roth. 2025. *Mapping for a Sustainable World: QGIS Technical Supplement*. Version 2.0 The University of Wisconsin Cartography Lab: Madison, WI. DOI: 10.5281/zenodo.5585647

Roth RE, G Gartner, G Baldrica-Franklin, A Cowart, **L Houtman**, A Kagawa, M Keskin, MJ Kraak, NT Nawshin, F Ortag, B Ricker, S Schlumpf, and Z Stachoň (Editors). 2025. *Atlas of Sustainability.* Vienna, Austria: The International Cartographic Association.

Houtman L, and RE Roth, 2021. *Mapping for a Sustainable World: QGIS technical supplement.* Version 1.0 The University of Wisconsin Cartography Lab: Madison, WI. DOI: 10.5281/zenodo.5585647

Roth RE, CM Sack, G Baldrica-Franklin, Y Chen, R Donohue, **L Houtman**, T Prestby, R Tolochko, and N Underwood, 2020. *Web Mapping: A Workbook for Interactive Cartography and Visualization on the Open Web*. Version 1.0. University of Wisconsin Cartography Laboratory: Madison, WI. DOI: 10.5281/zenodo.4685763

PEER-REVIEWED CONFERENCE PROCEEDINGS

Houtman L, G Baldrica-Franklin, and RE Roth. 2026. Reintroducing a QGIS Technical Supplement for *Mapping for a Sustainable World*. *Abstracts of the ICA (Cartography and Sustainable Development Workshop), 11,* p. 13.

Roth, RE, G Gartner, G Baldrica-Franklin, A Cowart, **L Houtman**, A Kagawa, ... & Z Stachoň. 2026. Introducing the *Atlas of Sustainability*: A case study in Actionable Cartography. *Abstracts of the ICA (Cartography and Sustainable Development Workshop), 11,* p. 4.

Robinson, AC, **L Houtman**, D McLaughlin, and CM Grozinger, 2025. Understanding User Engagement and Revisitation for Spatial Decision Support Systems in Pollinator Ecology. *Proceedings of the AGIT Conference,* p. 5-8.

Houtman, L. 2025. Characterizing the current state of mobile thematic cartography. *Abstracts of the ICA (International Cartographic Conference)*, *10*, p. 111.

Houtman, L. 2024. Future opportunities for mobile thematic map design in data journalism. *Abstracts of the ICA (European Cartographic Conference), 7*, p. 59.

Houtman, L. 2023. At the Intersection of Mobile Thematic Cartography and Data Journalism. *Abstracts of the ICA (International Cartographic Conference), 6*, p. 93.

Robinson AC, TJ Prestby, D McLaughlin, **L Houtman**, P Dudas, and C Grozinger. 2023. Geovisualization for Pollinator Decision Support with Beescape NexGen. *Abstracts of the ICA (International Cartographic Conference), 6*, p. 212.

Houtman L. 2022. Mapping US Elections: An Empirical Analysis of Design Techniques. *Abstracts of the ICA (European Cartographic Conference), 5*, p. 126.

Houtman L. and RE Roth. 2021. Introducing a QGIS Technical Supplement for *Mapping for a Sustainable World*. *Abstracts of the ICA (International Cartographic Conference), 3,* p. 113.

Roth RE, CM Sack, G Baldrica-Franklin, Y Chen, R Donohue, **L Houtman**, T Prestby, R Tolochko, and N Underwood, 2021. Introducing Web Mapping: A Workbook for Interactive Cartography and Visualization on the Open Web. *Abstracts of the ICA (International Cartographic Conference)*, *3*, p. 254.

BOOK REVIEWS

Houtman, L. 2024. Review of The Art of Insight: How Great Visualization Designers Think. *Cartographic Perspectives, 104,* p. 70-73.

Houtman, L. 2024. Review of Airline Maps: A Century of Art and Design. *Cartographic Perspectives, 103,* p. 99-102.

INVITED TALKS and LECTURES

Guest Lecture: "Webmapping: Overview and Resources" Spring 2026
Department of Geography, The Pennsylvania State University
Invited by Dr. Alicia Iverson for GEOG 467: Applied Cartographic Design

Invited Talk: "Techniques, challenges, and opportunities in mobile thematic map design for data journalism" Fall 2025
Department of Computing, Georgia Institute of Technology
Invited by Dr. Clio Andris for CS8803: Interactive Maps and Geovisualization

Guest Lecture: "Multivariate Maps" Fall 2025
Department of Geography, The Pennsylvania State University
Invited by Dr. Alicia Iverson for GEOG 361: Introduction to Cartography

Invited Talk: "Art, Activism, and Cartography" Fall 2025
Department of Sociology, American University
Invited by Dr. Felicia Henry for SOCY 358: Arts-Based Activism

Guest Lecture: "Multivariate Maps" Spring 2025
Department of Geography, The Pennsylvania State University
Invited by Tim Prestby for GEOG 361: Introduction to Cartography

Guest Lecture: "Election Mapping - America in Red & Blue" Fall 2023
Department of Geography, The Pennsylvania State University
Invited by Dr. Anthony Robinson for GEOG 6N: Maps and the Geospatial Revolution

Guest Lecture: "Maps and Power" Spring 2023
Department of Women, Gender, and Sexuality Studies, The Pennsylvania State University
Invited by Dr. Jill Wood for WMNST 197: Creating Safer Campuses

CONFERENCE PRESENTATIONS

Houtman, L. "Visualizing Political-Industrial Ecology: A Mobile-First Case Study of Natural Gas Fracking in Western Pennsylvania" *presented at* the American Association of Geographers Annual Meeting. February 2027. New York, New York.

Houtman, L. "What Do Young Adults Think About Mobile Thematic News Maps?" *presented at* the 46th meeting of the North American Cartographic Information Society (NACIS). October 2026. Milwaukee, Wisconsin.

Wright, M.W., **Houtman, L.** "Unmapping the Binary in the Borderlands: A Queer Cartographic Collaboration" *presented at* the Communication, Science, and Society Symposium. September 2026. University Park, Pennsylvania.

Houtman, L. “Mobile Thematic Map Design: An Analysis of Young Adult Audiences Via Creative Focus Groups” *presented at* the American Association of Geographers Annual Meeting. March 2026. San Francisco, California.

Houtman, L. “Designing Non-Binary Maps to Reimagine Borderlands” *presented at* the 45th meeting of the North American Cartographic Information Society (NACIS). October 2025. Louisville, Kentucky.

Houtman, L. “Characterizing the current state of mobile thematic cartography” *presented at* the 32nd International Cartographic Conference (ICC). August 2025. Vancouver, Canada.

Houtman, L. “No Boundaries, No Borders: Creating Non-Binary Maps” *presented at* the No Boundaries Symposium. May 2025. University Park, Pennsylvania.

Houtman, L., Wright, M.W. “An Exercise in Non-Binary Maps” *presented at* the American Association of Geographers Annual Meeting. March 2025. Detroit, Michigan.

Houtman, L. "The Challenges and Opportunities of Designing News Maps for Mobile Devices" *presented at* the Computation and Journalism Symposium. October 2024. Boston, Massachusetts.

Houtman, L. “Discussing Current Limits and Future Opportunities in Mobile Map Design” *presented at* the 44th meeting of the North American Cartographic Information Society (NACIS). October 2024. Tacoma, Washington.

Houtman, L. “Future Opportunities for Mobile Thematic Map Design in Data Journalism” *presented at* EuroCarto. September 2024. Vienna, Austria.

Houtman, L. “Using Beescape NexGen: A Pollinator Health Decision-Support Tool” *presented at* the Technologies for Agriculture and Living Systems Symposium. May 2024. University Park, Pennsylvania.

Houtman, L. “Mobile Thematic Cartography: Interviews on Design and Practice” *presented at* the American Association of Geographers Annual Meeting. April 2024. Virtual.

Houtman, L. “How Should We Design Mobile Thematic Maps” *presented at* the 43rd meeting of the North American Cartographic Information Society (NACIS). October 2023. Pittsburgh, Pennsylvania.

Houtman, L.“At the Intersection of Mobile Thematic Cartography and Data Journalism” *presented at* the 31st International Cartographic Conference (ICC). August 2023. Cape Town, South Africa.

Houtman, L.“The Challenges of Using AI to Promote Further Learning in Cartographic Education” *presented at* the Pre-Conference Workshop on Cartography and AI at the 31st International Cartographic Conference (ICC). August 2023. Stellenbosch, South Africa.

Houtman, L., Prestby, T.J., McLaughlin, D., Robinson, A.C., & Grozinger, C.“Designing Beescape NexGen: A Geovisualization Tool to Support Pollinator Health” *presented at* the American Association of Geographers Annual Meeting. March 2023. Denver, Colorado.

Houtman, L. “How Should We Design Election Maps” *presented at* the 42nd meeting of the North American Cartographic Information Society (NACIS). October 2022. Minneapolis, Minnesota.

Houtman, L. “Mapping US Elections: An Empirical Analysis of Design Techniques” *presented at* EuroCarto. September 2022. Vienna, Austria.

Houtman, L. “Mapping Presidential Elections: An Empirical Analysis of Effective Design Techniques” *presented at* the American Association of Geographers (AAG) Annual Meeting. March 2022. Virtual.

Houtman, L., Roth R.E."Introducing a QGIS technical supplement for Mapping for a Sustainable World" *presented at* the 30th International Cartographic Conference (ICC). December 2021. Florence, Italy.

PANEL DISCUSSIONS

Chair and Moderator, "Critical 21st Century Cartography: Rethinking Lines, Borders, and Binaries" *at* the American Association of Geographers Annual Meeting. February 2027. New York, New York.

Co-Moderator (*with* Meghan Kelly), "Cartographies of Interdependence: Intersectional Feminist Mapping in Community Struggles" *at* the 45th meeting of the North American Cartographic Information Society (NACIS). October 2025. Louisville, Kentucky.

Panelist, "LGBTQ+ in STEM Leading the Way" *at* The Pennsylvania State University. April 2025. University Park, Pennsylvania.

Panelist, "The Future of University Cartography Labs 2: Student Experience and Creating New Spaces" *at* the American Association of Geographers Annual Meeting. April 2024. Virtual.

Panelist, "Diversity, Equity, and Inclusion II: Queer Cartography" *at* the 43rd meeting of the North American Cartographic Information Society (NACIS). October 2023. Pittsburgh, Pennsylvania.

Co-Moderator (*with* FM Kim), "Finding Queerness in GIS and Cartography" *at* the American Association of Geographers Annual Meeting. March 2023. Denver, Colorado.

WORKSHOPS and CONFERENCE SESSIONS

Co-Organizer (*with* Silas Hill), "DEI Speaker Series: Cartographies of Interdependence: Intersectional Feminist Mapping in Community Struggles" *at* the 45th meeting of the North American Cartographic Information Society (NACIS). October 2025. Louisville, Kentucky.

Co-Organizer (*with* Gareth Baldrica-Franklin), "Unmapping Workshop", NACIS Commons *at* the 45th meeting of the North American Cartographic Information Society (NACIS). October 2025. Louisville, Kentucky.

Co-Organizer (*with* Robert E. Roth, et al.), "T/U(X)W Design Challenge" *at* the Technical University of Vienna (TU Wien). May 2025. Virtual.

Co-Organizer (*with* Gareth Baldrica-Franklin), "Critical Cartographic Processes" *at* the American Association of Geographers Annual Meeting. March 2025. Detroit, Michigan.

Co-Organizer (*with* Gareth Baldrica-Franklin), "Unmapping: Creative and Critical Cartography for All", NACIS Commons *at* the 44th meeting of the North American Cartographic Information Society (NACIS). October 2024. Tacoma, Washington.

Co-Organizer (*with* Zhaoxu Sui), "Putting the Human back in Cartography: Designs and Practices" *at* the American Association of Geographers Annual Meeting. April 2024. Virtual.

Co-Organizer (*with* Gareth Baldrica-Franklin), "Unmapping: Creative and Critical Cartography for All", NACIS Commons *at* the 43rd meeting of the North American Cartographic Information Society (NACIS). October 2023. Pittsburgh, Pennsylvania.

Co-Organizer (*with* FM Kim), "Finding Queerness in GIS and Cartography" *at* the American Association of Geographers Annual Meeting. March 2023. Denver, Colorado.

POSTER PRESENTATIONS

Houtman, L. "The Challenges and Constraints of Designing Mobile News Maps for Science Communication" *presented at* the Viral Movements Symposium. May 2024. University Park, Pennsylvania.

Houtman, L. "Evaluating the Use and Production of Mobile News Maps" *presented at* the Pennsylvania State University College of Earth and Mineral Sciences NSF GRFP Poster Session. October 2023. University Park, Pennsylvania.

Houtman, L. "Mapping Presidential Elections: An Empirical Analysis of Effective Design Techniques" *presented at* the 41st meeting of the North American Cartographic Information Society (NACIS). October 2021. Oklahoma City, Oklahoma.

Houtman, L. "Human Evolution in the East African Rift Valley" *presented at* the 41st meeting of the North American Cartographic Information Society (NACIS). October 2021. Oklahoma City, Oklahoma.

TEACHING EXPERIENCE

Instructor (Lecture and Lab): Cartography – Maps and Map Construction Spring 2027
Department of Geography, The Pennsylvania State University
GEOG 361 - Cartography – Maps and Map Construction

Instructor (Lecture and Lab): Maps and the Geospatial Revolution Fall 2026
Department of Geography, The Pennsylvania State University
GEOG 6N - Maps and the Geospatial Revolution

Project Mentor and Instructor: Independent Study Spring 2026
Department of Geography, The Pennsylvania State University
GEOG 494 - Research Projects in Geography

Curriculum Developer for Online Geospatial Education Fall 2024
Online Geospatial Education Program, The Pennsylvania State University
GEOG 486 - Cartography and Visualization (*with* Fritz Kessler and Marcela Suárez)

Undergraduate Teaching Intern: Interactive Cartography Fall 2021
Department of Geography, University of Wisconsin – Madison
Geography 575 - Interactive Cartography and Geovisualization (*with* Robert. E Roth & Gareth Baldrica-Franklin)

Undergraduate Teaching Intern: Introduction to Cartography Fall 2021
Department of Geography, University of Wisconsin – Madison
Geography 370 - Introduction to Cartography (*with* Robert E. Roth & Alicia Iverson)

FELLOWSHIPS and GRANTS

$13,000 **Interdisciplinary Approaches to Human-Environment Interaction** 2025-2027
The Pennsylvania State University Community, Science, and Society Initiative (CSSI)
Collaborator, "Mapping Against the Binary in the Mexico-US Borderlands"

$111,000 **Graduate Research Fellowship (GRFP)** 2024-2027
National Science Foundation (NSF)
Awardee, "Evaluating the Use and Production of Mobile News Maps"

$9,000	**Letters & Science Honors Mark Mensink Senior Honors Thesis Grant** *University of Wisconsin – Madison* Awardee, "Mapping Presidential Elections: An Empirical Analysis of Design Techniques"	2021-2022
$4,000	**McPherson Eye Research Institute Undergraduate Research Fellowship** *University of Wisconsin – Madison* Awardee, "Mapping Presidential Elections: An Empirical Analysis of Design Techniques"	2021-2022

HONORS and SCHOLARSHIPS

$700	**Ruby Miller and Erickson Graduate Student Enrichment Funding Award** *Penn State University, Department of Geography*	2026
$200	**Nancy Brown Geography Graduate Student Service Award** *Penn State University, Department of Geography*	2026
$700	**Abler and Erickson Graduate Student Enrichment Funding Award** *Penn State University, Department of Geography*	2026
$1,000	**Charles Hosler Diversity, Equity, and Inclusion Graduate Student Award** *Penn State University, College of Earth and Mineral Sciences (EMS)*	2026
$50	**No Boundaries Symposium Award for Best Paper (Third Place)** *Penn State University, Department of Geography*	2025
$500	**Myers Award for Excellence in Cartographic Design** *Penn State University, Department of Geography*	2025
$1,500	**Doctoral Student Scholarship Award** *Cartography and Geographic Information Society (CaGIS)*	2024
$300	**Master's Thesis Research Grant** *Cartography and Mapping Speciality Group, American Association of Geographers*	2024
$5,000	**Penn State EMS NSF GRFP Proposal Poster Competition Award** *Penn State College of Earth and Mineral Sciences (EMS)*	2023
$5,000	**Fund for Excellence in Graduate Recruitment (FEGR)** *Penn State University*	2022-2023
$100	**Excellence in the Department of Geography** *University of Wisconsin – Madison, Department of Geography*	2022
$100	**Achievement in in the Cartography/GIS Major** *University of Wisconsin – Madison, Department of Geography*	2022
$50	**Barbara Bartz Petchenik Award for Cartographic Design (First Place)** *University of Wisconsin – Madison, Department of Geography*	2021
$1,000	**Department of Geography Kohn Award** *University of Wisconsin – Madison, Department of Geography*	2021
$50	**Barbara Bartz Petchenik Award for Cartographic Design (Second Place)** *University of Wisconsin – Madison, Department of Geography*	2020

TRAVEL GRANTS

$500	**NACIS Student Travel Grant** *North American Cartographic Information Society (NACIS)*	2025
$1,800	**Early Career Award for the International Cartographic Conference (ICC)** *USA National Committee for the International Cartographic Association (ICA)*	2025
$1,000	**Young Scholars Award for the International Cartographic Conference (ICC)** *Executive Committee of the International Cartographic Association (ICA)*	2025

$1,500	**Penn State Graduate Student International Travel Grant** *Penn State Global*	2025
$500	**NACIS Student Travel Grant** *North American Cartographic Information Society (NACIS)*	2024
$500	**NACIS Student Travel Grant** *North American Cartographic Information Society (NACIS)*	2023
$200	**NACIS Diversity, Equity, and Inclusion Travel Grant** *North American Cartographic Information Society*	2023
$2,700	**Early Career Award for the International Cartographic Conference (ICC)** *USA National Committee for the International Cartographic Association (ICA)*	2023
$600	**Young Scholars Award for the International Cartographic Conference (ICC)** *Executive Committee of the International Cartographic Association (ICA)*	2023
$500	**NACIS Student Travel Grant** *North American Cartographic Information Society (NACIS)*	2022
$2,000	**Early Career Award for the International Cartographic Conference (ICC)** *USA National Committee for the International Cartographic Association (ICA)*	2021

SERVICE and LEADERSHIP

Co-Moderator (with Joy Ihuka), Practical Cartography Day 2026
North American Cartographic Information Society (NACIS)

Chair, NACIS Shop Initiative 2025-present
North American Cartographic Information Society (NACIS)

Co-Moderator (with Gareth Baldrica-Franklin), Practical Cartography Day 2025
North American Cartographic Information Society (NACIS)

NACIS Board Member 2024-present
North American Cartographic Information Society (NACIS)

NSF GRFP Workshop Peer Mentor 2024-present
College of Earth and Mineral Sciences (EMS), The Pennsylvania State University

Coffee Hour (Colloquium) Graduate Student Committee Member 2024-2026
Department of Geography, The Pennsylvania State University

Co-Moderator (with Nat Douglass), Practical Cartography Day 2024
North American Cartographic Information Society (NACIS)

Justice, Equity, Diversity, and Inclusion (JEDI) Student Representative 2023-2026
American Association of Geographers (AAG)

Supporting Women in Geography (SWIG) President 2023-present
Department of Geography, The Pennsylvania State University

Graduate Student Representative 2023-2024
Department of Geography, The Pennsylvania State University

Supporting Women in Geography (SWIG) Board Member 2022-2023
Department of Geography, The Pennsylvania State University

Social Media Coordinator and Board Member 2021-2022
Geography Club, University of Wisconsin-Madison

External Relations Committee Undergraduate Student Representative 2021-2022
Department of Geography, University of Wisconsin-Madison

JOURNAL EDITING and PEER REVIEW

Guest Editor, *Cartographic Perspectives* (Special Issue: Mobile and Responsive Maps)	2026-2027
Reviewer, *Annals of the American Association of Geographers*	2026-present
Reviewer, *GeoJournal*	2026-present
Reviewer, *GeoHumanities*	2025-present
Reviewer, *The Cartographic Journal*	2025-present
Reviewer, *Cartographic Perspectives*	2025-present
Reviewer, *Cartography and Geographic Information Science*	2024-present
Reviewer, *International Journal of Geographical Information Science*	2024-present

MEMBERSHIPS

Cartography and Geographic Information Society (CaGIS)	2024-present
American Association of Geographers (AAG)	2021-present
The Phi Beta Kappa Society (PBK)	2021-present
North American Cartographic Information Society (NACIS)	2020-present

TECHNICAL SKILLS

Web Development and Cartography

- Javascript *(including Leaflet and D3 data visualization libraries)*
- HTML/CSS
- FrontEnd web frameworks *(including Bootstrap)*
- QGIS
- Esri products *(ArcGIS JS API, ArcGIS Pro, AGOL, StoryMaps)*
- Git/GitHub

Data Visualization and Analysis

- Inkscape
- Adobe Creative Cloud *(Illustrator, Photoshop, InDesign)*
- R and RStudio
- Tableau
- Blender
- Microsoft Excel

Print Technology

- Large Format Printing (44 inch plotter)
- 3D Printing