

Mia Hines

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Education

Doctor of Philosophy in Computer Science degree (Currently pursuing).
Washington University in St. Louis in St. Louis, MO. May 2029.

Bachelor of Arts in Computer Science and a minor in Statistics (Received).
Grinnell College in Grinnell, IA. May 2024.

Doctoral Research Experience

Ph.D. Student • Washington University in St. Louis • August 2024 – Present • St. Louis, MO

Faculty Mentor: Alvitta Ottley

- Developed a web scraper that collected almost 100,000 images from over 32 public health organizations.
- Used VLM to assist in filtering and annotating the final visualization collection.
- Used PCA to configure design profiles of the organizations featured in the study.
- Future work includes relating messaging of the organizations to their produced visualizations and further evaluating accessibility within the visualization collection.

Publications

- **Hines, M.** & Ottley, A. (2026). Charting Public Health: A Taxonomic Study of Visualization Practices in the Public Health Field, IEEE VIS 2026 (In Submission)
- Ovienmhada, U., **Hines, M.**, Krisch, M., Diongue, A. T., Minchew, B., & Wood, D.R. (2024). Spatiotemporal facility-level patterns of summer heat exposure, vulnerability, and risk in United States prison landscapes. *GeoHealth*

Presentations

- **Mia Hines**, *DSS Talk: Visual Choices, Public Voices: Investigating the influence of design in public health infographics*, WashU CSE Department, Fall 2025. (oral presentation)
- Ufuoma Ovienmhada, **Mia Hines**, Andrew West, Jordan Mazurek, Richard Thomas, Brent M Minchew and Danielle Wood. *Spatial Pattern of Land Surface Temperatures and PM 2.5 in U.S. Prison landscapes using satellite-derived data*, American Geophysical Union (AGU) 2023. (oral presentation)

Undergraduate Research Experience

Media Lab Research Assistant • MIT • June 2023 – Present • Cambridge, MA

Research Supervisor and Faculty Mentor: Ufuoma Ovienmhada and Danielle Wood

- Performed a time-series analysis (2000-2022) on temperature rise occurring at state and federal prisons in the United States.

Graduate Assistant • Middlebury Institute of International Studies (MIIS) • February – May 2023 • Monterey, CA

Faculty Mentor: Carolyn Meyer

- Performed qualitative research on the influence of effective social justice programs and developed a curriculum model for students in visiting programs at the institution.

HCI & Visual Computing Research Assistant • Brown University • June – August 2022 • Providence, RI

Faculty Mentor: Jeff Haung and James Tompkin

- Produced an interactive web application called TeachHandi that accepted the user's writing of a word and compared it to the trace generated by a pre-existing ML model.

Professional Experience & Miscellaneous Projects

Administrative Assistant & Full-Stack Engineer • Sorkins • August 2017 – May 2022 • St. Louis, MO

- Increased user accessibility and flexibility with information, cleaned up data, and instrumentally decreased the loading time of key operations by 15%.
- Developed new user search tools including Family Business Search, Archive Search, Branch Locations Search, and Business Social Media Search. Programmed new download options for the information.

Data Scientist • Course Project for Environmental History • February 2023 – May 2023 • Monterey, CA

- Arranged, cleaned, and managed a large dataset of transcribed daily logbook entries from 1835-1839. Served as data liaison to transcribers in the course. Visualized route and sperm whale activity on a world map using ArcGIS. Results were published in a cover-story article of the Earth Island Journal.

Virtual Reality (VR) Project Developer • Independent Research • September 2018 - June 2019 • St. Louis, MO

- Designed and programmed Virtual Reality simulations to improve users' mental health. Simulations incorporated mindfulness practices, serene environments, and guided meditations. Conducted a mixed-method user study to estimate the simulations' efficiency. Participants' heart rate decreased by 10% on average and 93% of them recommended the simulation.

Teaching and Mentoring Experience

- Undergraduate Research Supervisor, WashU VIBE Lab • January – May 2026
- Master's Student Mentor, WashU VIBE Lab • January – August 2025
- Instructor Assistant, Kode With Klossy (KWK) CODE-A-BRATION Weekend • March 2025
- Founding Member & Lead Instructor, Girls Who Code (GWC) Chapter • October 2022 – May 2024
- Upperclassmen Mentor, Computer Science Department • January – May 2022, October 2023 – May 2024
- Executive Member & Co-President, Black Students in STEM (BSS) • September 2020 – December 2022
- Teaching Assistant (TA) for Introductory Statistics, Statistics Department • August – December 2022
- Student Advisory Member, Science Division Diversity & Inclusion Committee • January – May 2022

Fellowships, Honors, & Awards

- Clare Boothe Luce Graduate Fellowship
- AI-ACCESS NRT Fellowship
- GEM Associate Fellowship
- 2024 Henry M. and Theresa P. Walker Endowed Prize for Excellence in Computer Science
- Marie Nesbitt Promise Prize 2022 (Excellence in Leadership)

Featured Articles and Interviews

- Kode With Klossy, National 10-Year Anniversary Campaign, [Mia: Code x Impact](#), April 2025
- KSDK 5, [Supermodel and St. Louis native Karlie Kloss elevates coding opportunities focused on AI and machine learning in her hometown](#), March 2025
- Grinnell College, [Computer Science Department Celebrates Outstanding Graduates](#), May 2024
- Grinnell College, Grinnell's Girls Who Code group strives to close gender gap in tech jobs, March 2024
- MIT IDSS, *Inclusive research for social change: The MIT Student Research Program pairs underrepresented students with opportunities to examine inequity.* . . ., January, 2024
- Grinnell College, [Grinnell Students Attend Grace Hopper Celebration](#), October 2023
- MIT OGE Department, *MIT Summer Research Program (MSRP): Student Reflection*, August 2023
- KSQD Community Radio, [Rich King, Mallory Hoffbeck, and Mia Hines Share Their Adventure Into the Past - Guided by Captain Joy's Last Whaling Log](#), August 2023
- Earth Island Journal, [Captain Joy's Last Voyage: What a whaling captain's logbook can teach us about sperm whales and our oceans](#), Summer 2023
- MIIS, [Sunny Beaches, Sea Otters, and Other Shenanigans](#), February 2023

Career-Prep & Networking Conferences

- Grace Hopper Celebration 2025
- GEM Associate Fellowship Conference 2024
- Grace Hopper Celebration 2024
- Grace Hopper Celebration 2023
- Iowa Technology Summit 2022

Supplementary Educational & Certificate Programs

- Middlebury Institute of International Studies: Graduate-Level Semester in Environmental Studies • January-May 2023, GPA: 4.0/4.0.
- MIT Institute of Data, Systems, and Society (IDSS): Data Science & Machine Learning • June - August 2023

Specialized Technical Skills (Programming Languages & Software)

- Python, C, JavaScript, HTML/CSS, Bootstrap, NCurses, Java, SQL, UNIX, CUDA, R, A-Frame, Assembly, Scheme
- RStudio, Google Earth Engine, ArcGIS, Microsoft Excel, Stata