

Research Interests

My research aims to develop tools for people with disabilities to create and customize AI-based applications to improve the accessibility of tasks in their day-to-day lives. In my work, I draw from techniques in end-user programming, mobile sensing, and machine learning, and I adopt various co-design approaches to design and build novel systems.

Areas: Human-Computer Interaction, Accessibility, DIY Technology, AR/VR, Toolkits, Mobile Sensing, Collaboration

Education

- 09/2019 – 09/2025 **University of Michigan**
Ann Arbor, MI Ph.D. in Computer Science and Engineering, advised by Anhong Guo
Master of Science in Computer Science and Engineering
Thesis: ‘Hacking’ Assistive Technology: Creating Personal AI Tools for Access
- 09/2015 – 05/2019 **University of Michigan**
Ann Arbor, MI Bachelor of Science in Computer Science, Minor in Mathematics

Professional Experience

- Summer 2023 **AI/ML Accessibility Research, Apple** Research Intern
Seattle, WA Mentored by Cole Gleason
- Summer 2019 **AI/ML Accessibility Research, Apple** Research Intern
Pittsburgh, PA Developed interaction techniques to make mobile augmented reality accessible for VoiceOver users [C.03]
Mentored by Jeffrey Bigham
- Summer 2018 **EPIC Research Group, Microsoft Research** Research Intern
Redmond, WA Evaluated the potential of current head-mounted augmented reality devices in providing guidance for home improvement projects [P.01]
Mentored by Eyal Ofek and Adam Fourney

Awards

- 2025 **Susan Lipschutz Award, University of Michigan:** For scholarly achievement and social responsibility in research
- 2023 **Finalist, CSE Honors Competition, University of Michigan**
- 2023 **CSE Service Award for Excellence in Climate and DEI, University of Michigan**
- 2021–2024 **NSF Graduate Research Fellowship**
- 2019–2020 **CSE First-Year Department Merit Fellowship, University of Michigan**

Publications

Peer-Reviewed Conference and Journal Papers

- C.14 **Jaylin Herskovitz**, Ellie Seehorn, Anhong Guo. A11yExtensions: Accessibility Extensions to Augment Mobile AI Assistive Technology In-Situ (*In Submission*).
- C.13 Jeremy Zhengqi Huang, **Jaylin Herskovitz**, Liang-Yuan Wu, Cecily Morrison, Dhruv Jain. Weaving Sound Information to Support Real-Time Sensemaking of Auditory Environments: Co-Designing with a DHH User. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI 2025)*.
- C.12 Rahaf Alharbi, Angela Cheong, **Jaylin Herskovitz**, Robin Brewer, Sarita Schoenebeck. “Trying to Piece It Together”: Exploring Accessible Error Detection in Emerging Privacy Techniques With Blind People. In *Proceedings of the 27th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2025)*.
- C.11 **Jaylin Herskovitz**, Andi Xu, Rahaf Alharbi, Anhong Guo. ProgramAlly: Creating Custom Visual Access Programs via Multi-Modal End-User Programming. In *Proceedings of the 37th Annual ACM Symposium on User Interface Software and Technology (UIST 2024)*.
- C.10 Rahaf Alharbi, Pa Lor, **Jaylin Herskovitz**, Sarita Schoenebeck, Robin Brewer. Misfitting With AI: How Blind People Verify and Contest AI Errors. In *Proceedings of the 26th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2024)*.
- C.09 **Jaylin Herskovitz**, Andi Xu, Rahaf Alharbi, Anhong Guo. Hacking, Switching, Combining: Understanding and Supporting DIY Assistive Technology Design by Blind People. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2023)*.
- C.08 **Jaylin Herskovitz**, Yi Fei Cheng, Anhong Guo, Alanson Sample, Michael Nebeling. XSpace: An Augmented Reality Toolkit for Enabling Spatially-Aware Distributed Collaboration. In *Proceedings of the ACM on Human-Computer Interaction (ISS 2022)*.
- C.07 Amani Alkayyali, Yasha Irvantchi, **Jaylin Herskovitz**, Alanson Sample. UbiChromics: Enabling Ubiquitously Deployable Interactive Displays with Photochromic Paint. In *Proceedings of the ACM on Human-Computer Interaction (ISS 2022)*.
- C.06  Cheuk Yin Phipson Lee, Zhuohao Zhang, **Jaylin Herskovitz**, JooYoung Seo, Anhong Guo. CollabAlly: Accessible Collaboration Awareness in Document Editing. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2022)*.
[Honorable Mention]
- C.05 J. Lee, **J. Herskovitz**, Y.H. Peng, A. Guo. Multi-Layered Touch Exploration to Encourage Skepticism Towards Imperfect AI-Generated Image Captions. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2022)*.
- C.04 M. Nebeling, S. Rajaram, L. Wu, Y. Cheng, **J. Herskovitz**. XRStudio: A Virtual Production Technology Probe for Immersive Instructional Experiences. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2021)*.

- C.03 **J. Herskovitz**, J. Wu, S. White, A. Pavel, G. Reyes, A. Guo, J. Bigham. Making Mobile Augmented Reality Applications Accessible. In *The 22nd International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2020)*.
- C.02 Y. Chen, **J. Herskovitz**, W.S. Lasecki, S. Oney. A Hybrid Crowd-Machine Workflow for Program Synthesis. In *Proceedings of the IEEE Symposium on Visual Languages and Human-Centered Computing (VL/HCC 2020)*.
- C.01 Y. Chen, **J. Herskovitz**, G. Matute, A. Wang, S.W. Lee, W.S. Lasecki, S. Oney. EdCode: Towards Personalized Support at Scale for Remote Assistance in CS Education. In *Proceedings of the IEEE Symposium on Visual Languages and Human-Centered Computing (VL/HCC 2020)*. **[Best Short Paper Award]**

Posters, Demos, and Extended Abstracts

- A.03 C.Y.P. Lee, Z. Zhang, **J. Herskovitz**, J.Y. Seo, A. Guo. CollabAlly: Accessible Collaboration Awareness in Document Editing. (**ASSETS 2021 Demos**).
- A.02 J.Lee, Y.H. Peng, **J. Herskovitz**, A. Guo. Image Explorer: Multi-Layered Touch Exploration to Make Images Accessible. (**ASSETS 2021 Demos**).
- A.01 **J. Herskovitz**, E. Ofek, W.S. Lasecki, A. Fourney. Opportunities for In-Home Augmented Reality Guidance. (**CHI 2019 Late Breaking Work**).

Workshops and Consortia

- W.02 **J. Herskovitz**. DIY Assistive Software: End-User Programming for Personalized Assistive Technology. ASSETS 2023 Doctoral Consortium.
- W.01 **J. Herskovitz**, J. Chinnam, I. Wong, M. Liu, J. Mo, S.W. Lee, W.S. Lasecki. Crowdsourcing for Effortless Creation of Collaborative AR Spaces. In *CHI Workshop on Novel Interaction Techniques for Collaboration in VR*. 2018.

Patents

- P.01 J.P. Bigham, **J. Herskovitz**, S. White, J. Wu. Accessible Mixed Reality Applications. United States Patent Application 18/239,018, filed August 28, 2023.

Dissertation

- D.01 **Jaylin Herskovitz**. ‘Hacking’ Assistive Technology: Creating Personal AI Tools for Access. Ph.D. Dissertation. Computer Science and Engineering, University of Michigan. Ann Arbor, MI. 2025.

Misc. Publications

- M.01 Ellie Seehorn, **Jaylin Herskovitz**. VISIONS of Accessibility: Human-AI Lab (HAIL), University of Michigan. XRDS: Crossroads, The ACM Magazine for Students. 2024.

Invited Talks

- Spring 2025 **‘Hacking’ Assistive Technology: Creating and Customizing AI Tools for Personal Accessibility**
University of Virginia, Department of Computer Science
Tufts University, Department of Computer Science

Purdue University, Department of Computer Science

- 06/2024 **AI-Powered Visual Assistive Technologies from the UMich Human-AI Lab**
Ann Arbor District Library VISIONS 2024: Technology and Services for the Blind,
Visually Impaired, and Physically Disabled
Anhong Guo and Jaylin Herskovitz
- 03/2024 **Hacking, Switching, Combining: Understanding and Supporting DIY Assistive
Technology Design by Blind People**
University of Michigan Disability Visibility in Engineering Symposium
- 01/2022 **Making Mobile Augmented Reality Accessible**
Adobe Research Seminar
- 12/2021 **Making Mobile Augmented Reality Accessible**
Cornell's XR Access Initiative Seminar

Service

Program Committee

- 2024 ACM CHI 2024 Late Breaking Work AC

Organizing Committee

- 2021–2022 **Web Co-Chair**, ACM ASSETS 2022 Organizing Committee

University of Michigan

- 2024–2025 **MISC Student Coordinator**, Michigan Interactive and Social Computing
- 2022–2023 **DEI Chair**, UMich Computer Science and Engineering Graduate Student
Organization (CSEG)
- 2022–2023 **Volunteer Mentor**, University of Michigan CSE Wellness Buddy Program
- Fall 2022 **Volunteer Mentor**, University of Michigan CSE PhD Application Feedback Program
for Underrepresented Students
- Fall 2022, 2024 **Volunteer NSF GRFP Coach**, University of Michigan
- Spring 2022, 2023 **Volunteer Speaker**, University of Michigan Visit Day DEI Student Panel
- 2021–2022 **Student DEI Representative**, University of Michigan CSE DEI Committee
- 2020–2022 **Secretary**, UMich Computer Science and Engineering Graduate Student Organization
(CSEG)

Reviewer

- 2019– **ACM CHI**: 2021, 2022, 2023**, 2024*, 2025***
ACM UIST: 2021*, 2024, 2025
ACM ISS: 2024
ACM DIS: 2022
ACM CHI Late Breaking Work: 2019, 2021, 2022, 2024*

* Denotes special recognition for outstanding reviews

Outreach

- Winter 2023* **Volunteer Speaker, Washtenaw Community College Stem Scholars Program:** Presented to students on research opportunities and career paths in computer science.
- Summer 2020 & Fall 2020* **Volunteer Mentor and Team Lead,** Bold Idea Website Development course for 4th–12th grade students, won Outstanding Mentor Award.
- November 2017* **Wolverine Pathways Visit Day Volunteer:** Led HCI research activity for high school students.

Teaching

- Fall 2024* **Graduate Student Instructor: Human Computer Interaction (EECS 593)**
- Winter 2021* **Graduate Student Instructor: User Interface Development (EECS 493)**
- Administrative work for a class of 300+ undergraduates learning web design and development, and human-centered design practices.
 - Developed and graded course materials such as projects, quizzes, and exams.
 - Held office hours and moderated an online course forum.
- Summer 2016* **M-STEM Academies Academic Facilitator**
Led discussion sections for a calculus course for incoming freshmen.

Mentoring

- Summer 2024* **Ellie Seehorn** (Grinnell College, visiting REU student)
First Position: PhD Student at University of Michigan CS
- 2022–2024* **Andi Xu** (University of Michigan, project mentor)
First Position: Software engineering at Meta and CS Masters at Stanford
- 2021–2022* **Yi Fei Cheng** (University of Michigan, project mentor)
First Position: PhD Student at CMU HCII