

# MARGARET ELLEN “ELLIE” SEEHORN

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## EDUCATION

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### University of Michigan

PhD in Computer Science and Engineering

Advised by Anhong Guo and Venkatesh Potluri

Ann Arbor, MI

August 2025-2030 (expected)

### Grinnell College

B.A. in Computer Science (Honors) and Sociology (Honors), Concentration in Statistics

GPA: 3.95/4.0

Grinnell, IA

May 2025

## RESEARCH EXPERIENCE

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### PhD Student, University of Michigan CSE [1],[2]

*Supervisors: Dr. Anhong Guo and Dr. Venkatesh Potluri*

August 2025 - Present

University of Michigan

- Researching how personal devices such as smart phones and wearables may be used in conjunction with AI systems to facilitate individualized accessibility experiences that empower agency and autonomy

### Computing Research Association Distributed REU [3], [4]

*Supervisors: Dr. Anhong Guo, and Jaylin Herskovitz (PhD Student)*

June 2024 - August 2024

University of Michigan

- Developed accessibility-layer application for delivering augmentations such as camera aiming, unknown-unknown surfacing, and model debugging to existing AI-powered mobile assistive technologies
- Explored iOS Shortcuts as a means to integrate app functionality with existing tools
- Presented lab projects to Blind/Visually Impaired (BVI) community members at VISIONS 2024

### Carnegie Mellon University HCII REU [5], [6], [7]

*Supervisors: Dr. Vincent Aleven, Dr. Haiyi Zhu and C. Naomie Williams (PhD student)*

June 2023 - August 2023

CMU

- Designed and conducted semi-structured interview protocol to evaluate design futures for integrating Individualized Education Programs (IEPs) into Adaptive Learning Tools (ALTs) in Special Education
- Performed open coding and affinity mapping of interview results to inform guidelines for IEP-aware ALT implementations

### DUB REU [8],[9],[10]

*Supervisors: Dr. Jennifer Mankoff*

June 2022 - August 2022

University of Washington

- Developed an optimization algorithm to select ideal embroidery textures for textile tactile graphics
- Engineered novel method for creating braille with machine embroidery
- Designed and ran a user study measuring the efficacy of embroidered tactile graphics relative to traditional ones
- Debugged OPTIMISM domain-specific metaheuristic optimization framework
- Explored conductive-thread sonification as a means for adding live audio feedback to tactile graphics

## PUBLICATIONS

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- [1] **E. Seehorn**, G. S.-H. Kim, A. Zeidieh, A. Jammaa, K. Lee, A. Shah, J. Herkskovitz, A. Guo, and V. Potluri, “Bespoke visual assistance: What and how do blind and low-vision people create with agentic programming?” In submission to ASSETS ’26 (Technical Paper), 2026.
- [2] S. Madan, S. Surabiyil Bindu, V. Pimenova, **E. Seehorn**, and V. Potluri, “Reflections and recommendations on ai adoption practice from a mixed-ability research group,” In submission to ASSETS ’26 (Experience Report), 2026.
- [3] **E. Seehorn** and J. Herskovitz, “VISIONS of accessibility: Michigan’s Human-AI lab fosters community engagement and real-world technical solutions,” *XRDS*, vol. 31, no. 1, 2024. DOI: 10.1145/3688091. [Online]. Available: <https://dl.acm.org/doi/10.1145/3688091>.
- [4] J. Herskovitz, **E. Seehorn**, A. Jammaa, J. Meddaugh, and A. Guo, “All extensions: Accessibility extensions to augment mobile ai assistive technology in-situ,” in *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems*, ser. CHI ’26, Association for Computing Machinery, 2026, ISBN: 9798400722783. DOI: 10.1145/3772318.3791559. [Online]. Available: <https://doi.org/10.1145/3772318.3791559>.
- [5] C. N. Williams, **M.E. Seehorn**, M. Ellis-Einhorn, H. Zhu, and V. Alevan, “The hidden majority: Examining the inaccessibility crisis as a barrier to equitable education,” ser. ISLS ’24, Workshop, run on ISLS Community Day 2024, Buffalo, NY, USA: International Society of the Learning Sciences, 2024. [Online]. Available: <https://2024.isls.org/proceedings/>.
- [6] C. N. Williams, **M.E. Seehorn**, H. Zhu, and V. Alevan, “Challenges and design opportunities for technology-enhanced learning in special education,” In progress, 2024.
- [7] C. N. Williams, **M.E. Seehorn**, M. Ellis-Einhorn, H. Zhu, and V. Alevan, “The hidden majority: Examining the inaccessibility crisis as a barrier to equitable education,” ser. ECTEL ’25, Buffalo, NY, USA: Twentieth European Conference on Technology Enhanced Learning, 2024. [Online]. Available: <https://ea-tel.eu/ectel2025/accepted-papers>.
- [8] **M.E. Seehorn**, C. Winston, B. Liu, G. S.-H. Kim, E. White, G. Nupur, K. Glazko, A. Desai, J. Cao, M. Hofmann, and J. Mankoff, “Beyond beautiful: Embroidering legible and expressive tactile graphics,” in *The 27th International ACM SIGACCESS Conference on Computers and Accessibility*, ser. ASSETS ’25, Denver, CO, USA: Association for Computing Machinery, 2022. DOI: 10.1145/3559400.3565586. [Online]. Available: <https://doi.org/10.1145/3663547.3746336>.
- [9] K. Glazko, **E. Seehorn**, M. Lamkin, K. Mankoff-Dey, J. Cha, S. Siganamalla, B. Kosa, and J. Mankoff, “Prompt injections as a tool for agency and expression in multi-user gAI systems,” In submission to UIST ’26, 2026.
- [10] M. Hofmann, N. Auradkar, J. Birchfield, J. Cao, A. G. Hughes, G. S.-H. Kim, S. Kurpad, K. J. Lum, K. Mack, A. Nilakantan, **M.E. Seehorn**, E. Warnock, J. Mankoff, and S. E. Hudson, “Optimism: Enabling collaborative implementation of domain specific metaheuristic optimization,” in *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*, ser. CHI ’23, Hamburg, Germany: Association for Computing Machinery, 2023, ISBN: 9781450394215. DOI: 10.1145/3544548.3580904. [Online]. Available: <https://doi.org/10.1145/3544548.3580904>.

## WORK EXPERIENCE

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### Computer Science Course Mentor

*Grinnell College Computer Science Department*

Jan 2023 - Present

Grinnell, IA

- Provided assistance to Professor and students during class sessions
- Hosted weekly review sessions to practice and clarify recent material, answer student questions, and provide guidance on student projects
- Courses Mentored:
  - Spring ’25:** Analysis of Algorithms
  - Fall ’24:** Operating Systems & Parallel Algorithms w/ Lab
  - Spring ’24:** Imperative Problem Solving and Data Structures w/ Lab

**Fall '23:** Functional Problem Solving w/ Lab

**Spring '23:** Object-Oriented Programming, Data Structures, & Algorithms

**Computer Science Grader**

*Grinnell College Computer Science Department*

Jan 2022 - Dec 2022

Grinnell, IA

- Provide substantive feedback and grades on student work in Grinnell's introductory CS courses

- Courses Graded:

**Fall '22:** Imperative Problem Solving and Data Structures w/ Lab

**Spring '22:** Functional Problem Solving w/ Lab

**Peer Connections Pre-orientation Leader**

*Grinnell College Intercultural Affairs*

Aug 2023 - May 2025

Grinnell, IA

- Conducted an engaging and inclusive week of programming for incoming Grinnell College students with marginalized identities
- Acted as an individual mentor beyond the week of programming for two students, meeting weekly

**Access Student Leader**

*Grinnell College Disability Resources*

Aug 2021 - May 2025

Grinnell, IA

- Revise documents to be digitally accessible for various campus constituents
- Create engaging social media content for department social media, write and apply alt-text and captions
- Design print visuals for distribution and department promotion around campus

## LEADERSHIP

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**UIST 2026 Accessibility Chair**

*ACM Symposium on User Interface Software and Technology (UIST)*

October 2025 - Present

Detroit, MI

- Ensured accessibility in the review process for reviewers of all abilities
- Audited and coordinated with the venue to ensure physical accessibility of event spaces
- Coordinated attendee accommodations

**Computer Science SEPC Member**

*Grinnell College Computer Science Department*

Aug 2022 - May 2025

Grinnell, IA

- Elected by my peers as a liaison between the department and students
- Hosting weekly events to foster community
- Provide an outlet to anonymously express any course concerns
- Offer a student voice to faculty review and hiring processes

**Girls Who Code, Grinnell Chapter, Founding Member**

*Grinnell College*

Jan 2023 - May 2025

Grinnell, IA

- Develop and teach curriculum about computer science to 5th and 6th grade female and nonbinary students at Grinnell Middle School
- Topics included web development and robotics
- Foster sense of belonging in tech for next generation of computer scientists

**Grinnell Women and Gender Minorities in Computing**

*Grinnell College*

Aug. 2021 - May 2025

Grinnell, IA

- Member: 2021-22; President 2022-2025
- Provide space for discussion and community among gender-minority computer science students at Grinnell College
- Host empowering speakers who are gender minorities in technology

**Grinnell Computing Peers United**  
*Grinnell College*

Jan. 2022 - May 2025  
Grinnell, IA

- Mentee: Jan 2022-May 2022; Mentor Oct 2022-Present; Program Coordinator Sept 2023-May 2025
- Match early-career and established computer science students at Grinnell College in a mentoring relationship
- Host community-building events each semester for mentors and mentees

FELLOWSHIPS AND GRANTS

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NSF GRFP Fellow, awarded by the National Science Foundation *2026*  
Rackham Merit Fellow, awarded by University of Michigan Rackham Graduate School *2025*

AWARDS AND HONORS

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Henry M. and Theresa P. Walker Endowed Prize, awarded by Grinnell College CS department *2025*  
Goldwater Scholar, awarded by The Barry Goldwater Excellence in Education Foundation *2024*  
Phi Beta Kappa (inducted in junior year) *May 2024*  
Winner of UW CREATE Accessible and Inclusive Textiles Hackfest *July 2022*  
Grinnell College Dean's List, awarded by Grinnell College *Fall 2021-Spring 2024*  
Founders' Scholarship, awarded by Grinnell College *Fall 2021-Spring 2025*  
National Merit Scholar, awarded by National Merit Scholarship Corporation *2021*

STUDENTS MENTORED

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Yushan Wei, University of Michigan *2026*