

AASHAKA DESAI

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EDUCATION

University of Washington, Paul G. Allen School of CS and Engineering

PhD Candidate in Computer Science

Advised by Dr. Jennifer Mankoff and Dr. Richard Ladner

SEATTLE, WA

2020 – PRESENT

University of Delaware

Bachelor of Science, double major in Computer Science and Cognitive Science, Cum Laude

GPA: 3.86

NEWARK, DE

MAY 2020

RESEARCH SUMMARY

My research focuses on studying how existing technologies constrain communication and languaging practices and exploring how we might better reflect multilingualism and multimodalism in the design of communication accessibility technology. In my dissertation, I examine d/Deaf and hard-of-hearing communication and accessibility across a variety of contexts: speechreading in video calls, sign language dictionaries, captioning in multilingual media and conversations. Using both qualitative and machine learning approaches, my research contributions span empirical, design, and technical domains. My work has been published at top-tier HCI and ML venues, including ACM CHI, ASSETS, and NeurIPS.

PUBLICATIONS

CONFERENCE PAPERS

In Submission to EMNLP. Investigating Dictionary Expansion for Video-Based Sign Language Dictionaries

Aashaka Desai, Daniela Massiceti, Richard E. Ladner, Hal Daumé III, Danielle Bragg, Alex X. Lu.

Exploring Disability Culture Through Accounts of Disabled Innovators of Accessibility Technology

Aashaka Desai, Jennifer Mankoff, Richard Ladner. 2025. 27th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '25).

Beyond Beautiful: Embroidering Legible and Expressive Tactile Graphics

Margaret E. Seehorne, Claris Winston, Bo Liu, Gene S-H Kim, Emily White, Nupur Gorkar, Kate Glazko, **Aashaka Desai**, Jerry Cao, Megan Hofmann, Jennifer Mankoff. 2025. 27th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '25).

Toward Language Justice: Exploring Multilingual Captioning for Accessibility

Aashaka Desai, Rahaf Alharbi, Stacy Hsueh, Richard Ladner, Jennifer Mankoff. 2025. CHI Conference on Human Factors in Computing Systems (CHI '25). <https://doi.org/10.1145/3706598.3713622>

Exploring Reduced Feature Sets for American Sign Language Dictionaries

Ben Kosa, **Aashaka Desai**, Alex X. Lu, Richard Ladner, Danielle Bragg. 2025. CHI Conference on Human Factors in Computing Systems (CHI '25). <https://doi.org/10.1145/3706598.3714118>

ASL Citizen: A Community Sourced Dataset for Advancing Isolated Sign Language Recognition

Aashaka Desai, Lauren Berger, Fyodor Minakov, Vanessa Milan, Chinmay Singh, Kriston Pumphrey, Richard Ladner, Hal Daumé III, Alex X. Lu, Naomi Caselli, Danielle Bragg. 2023. Advances in Neural Information Processing Systems 36 (NeurIPS '23).

Working at the Intersection of Race, Disability, and Accessibility

Christina Harrington, **Aashaka Desai**, Aaleyah Lewis, Sanika Moharana, Anne Ross, Jennifer Mankoff. 2023. 25th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '23).

<https://doi.org/10.1145/3597638.360838>

Maintaining the Accessibility Ecosystem: a Multi-Stakeholder Analysis of Accessibility in Higher Education

Kelly Avery Mack, Natasha Sidik, **Aashaka Desai**, Emma McDonnell, Kunal Mehta, Christina Zhang, Jennifer Mankoff. 2023. Experience Report at 25th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '23).

An Autoethnographic Case Study of Generative Artificial Intelligence's Utility for Accessibility

Kate Glazko, Momona Yamagami, **Aashaka Desai**, Kelly Avery Mack, Venkatesh Potluri, Xuhai Xu, Jennifer Mankoff. 2023. Experience Report at 25th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '23).

Understanding and Enhancing Speechreading Experiences for Accessible Communication in an Online Context

Aashaka Desai, Jennifer Mankoff, Richard Ladner. 2023. CHI Conference on Human Factors in Computing Systems (CHI '23). <https://doi.org/10.1145/3544548.3580810>

EXTENDED ABSTRACTS, POSTERS & OTHER WORKS

What Do We Talk About When We Talk About Culture

Aashaka Desai, Stacy Hsueh. 2024. Workshop on Challenges and Considerations for Accessibility Research Across Cultures and Regions at ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '24)

Systemic Biases in Sign Language AI Research: A Deaf-Led Call to Reevaluate Research Agendas

Aashaka Desai, Maartje De Meulder, Julie A. Hochgesang, Annemarie Kocab, Alex X. Lu. 2024. 11th Workshop on the Representation and Processing of Sign Languages: Evaluation of Sign Language Resources (LREC COLING '24).

Language Technology at the Margins: Designing for Fluidity in d/DHH Communication Accessibility

Aashaka Desai. 2023. Doctoral Consortium at 25th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '23 Doctoral Consortium).

Enhancing Access to High Quality Tangible Information through Machine Embroidered Tactile Graphics

Margaret E. Seehorne, Gene S-H Kim, **Aashaka Desai**, Megan Hofmann, Jennifer Mankoff. 2022. 7th Annual ACM Symposium on Computational Fabrication (SCF '22).

Using Fiber Arts and Sonification to Improve Data Accessibility of Maker Spaces

Aashaka Desai, Venkatesh Potluri, Aaleyah Lewis, Daniel Campos Zamora, Jennifer Mankoff, Richard Ladner. 2022. Workshop on Inclusive Makerspaces at CHI Conference on Human Factors in Computing Systems (CHI '22).

RESEARCH EXPERIENCE

Microsoft Research

SEATTLE, WA

Research Intern; Advised by Dr. Danielle Bragg, Dr. Alex Lu, Dr. Hal Daumé III

SUMMER 2022 & 2023

- Cleaned, analyzed and prepared a community curated isolated sign language dataset for dissemination
- Established benchmarks for sign language recognition by training video-based and pose-based models on collected data
- Defined the task of dictionary retrieval ground future sign language recognition research
- Further explored techniques to incorporate new signs into dictionaries (e.g., few-shot learning, meta-learning)

University of Washington: Make4all Lab

SEATTLE, WA

Graduate Research Assistant; Advised by Dr. Jennifer Mankoff and Dr. Richard Ladner

2021-PRESENT

- Led and conducted several research studies with d/Deaf and hard-of-hearing individuals exploring communication accessibility across a variety of technologies and contexts (e.g., speechreading in video calls, multilingual conversations)
- Collaborated on breadth of accessibility research projects including explorations of generative AI, disability resources in higher education, and embroidered tactile graphics

University of Delaware: Speech Language Acquisition and Multilingualism Lab

NEWARK, DE

Undergraduate Research Assistant; Advised by Dr. Giovanna Morini

SPRING 2019 – SUMMER 2020

- Created animated stimuli for lab studies, recruited participants, and analyzed data by coding participant videos
- Developed software to analyze eye-gaze participant videos for studies that use preferential looking procedure, along with a variation that supports data collected using Tobii Eye-Tracking Software

TEACHING & MENTORING

CSE 590W: CREATE Accessibility Seminar

SEATTLE, WA

Lead Facilitator

FALL 2023-PRESENT

CSE 513: Disability Inclusion for Technologists

SEATTLE, WA

Teaching Assistant

SPRING 2024

CSE 446/546: Machine Learning

SEATTLE, WA

Teaching Assistant

FALL 2021

Mentoring Undergraduate Researchers

- Benjamin Epstein, Aagney Iyer, Sophia Lin (*Multilingual Captioning*)
- David Martin, Ben Kosa (*Sign Language Dictionaries*)
- Gene S-H Kim, Ellie Seehorne, Claris Winston (*Embroidered Tactile Graphics*)
- Karman Singh (*Speechreading*)

Guest Lectures and Invited Teaching

INFO 352: Gender, Race, and Information Technology (UW) <i>Panelist for Dr. Wanda Pratt</i> <ul style="list-style-type: none">Panel on Ableism and Accessible Technology	SPRING 2025
CSE 493: Accessibility (UW) <i>Panelist for Dr. Jennifer Mankoff</i> <ul style="list-style-type: none">Panel on Intersectionality in Accessibility Research	FALL 2024
HCDE 515: Accessibility and Inclusive Design (UW) <i>Guest Lecture for Dr. Leah Findlater</i> <ul style="list-style-type: none">Designing for Language in Sign Language Technology and Research	SPRING 2024
INFO 300: Research Methods (UW) <i>Guest Lecture for Dr. Wes King</i> <ul style="list-style-type: none">Language Technology at the Margins: Designing for d/DHH Communication Accessibility	FALL 2023
CS Next Grad School Prep Workshop (UW) <i>Presenter</i> <ul style="list-style-type: none">Understanding and Enhancing Speechreading Experiences for Accessible Communication Online	SPRING 2023
HCDE 515: Accessibility and Inclusive Design (UW) <i>Guest Lecture for Dr. Sarah Coppola</i> <ul style="list-style-type: none">Understanding and Enhancing Speechreading Experiences for Accessible Communication Online	WINTER 2023

AWARDS & FUNDING

UW CREATE Race, Disability, and Technology Tier 1 Grant <ul style="list-style-type: none">Awarded \$15000 to explore challenges and opportunities in multilingual captioning for accessibilityConceptualized the proposed research and authored the grant proposal	2024
Jeff Dean & Heidi Hopper Fellowship Recipient <ul style="list-style-type: none">One-year fellowship awarded to support a PhD student in UW CSE during their first year	2020-2021
Steven Geracimos Memorial Award <ul style="list-style-type: none">Monetary award to an outstanding undergraduate in Computer and Information Sciences who demonstrates both interest and aptitude for the subject, characterized by Steven Geracimos	2020
Outstanding Achievement in Undergraduate Cognitive Science <ul style="list-style-type: none">Awarded in recognition of an outstanding Undergraduate in Cognitive Science	2020
Arthur Ashe Jr. Sports Scholar Award, Runner-Up <ul style="list-style-type: none">Awarded to student athletes who have excelled in both the classroom and the field	2020
CAA Randolph Inspiration Award <ul style="list-style-type: none">Awarded to athletes who demonstrate strength of character and positive human spirit	2020

INVITED TALKS & PANELS

Deaf Safe AI: Symposium on AI and Sign Language Interpreting (Brown University)	SPRING 2024
Keynote Speaker	
<ul style="list-style-type: none">Designing for Language in Sign Language Technology and Research	
UW Public Lecture Series (UW)	WINTER 2024
Co-Moderator for Conversation with Patty Berne from Sins Invalid	
<ul style="list-style-type: none">Disability Justice: Centering Intersectionality and Liberation	
CSE Colloquium (UW)	FALL 2023
Presenter	
<ul style="list-style-type: none">Working at the Intersection of Race, Disability, and Accessibility	
Race, Disability & Technology: A Cross-Campus Conversation (UW CREATE)	WINTER 2023
Panelist	
<ul style="list-style-type: none">Multilingual Captioning Accessibility for d/DHH and Disabled Caption Users	

SKILLS

- Proficient in Java, C, C++, Python; Basic knowledge of ISL and R
- Experience working in Unix/Linux environment, PyTorch, Tobii Lab Projects, SuperCoder, ShotCut
- Languages: English (fluent), Gujarati (fluent), Hindi (intermediate), French (basic), Arabic (basic), American Sign Language (intermediate)

Department Service

Make4all Lab Meeting Coordinator	2022–
UW Prospective Visit Days Volunteer	2022
PAMS mentor	2023
New Grad Mentor	2021– 2022
Care Committee Volunteer	PRESENT

Reviewing

- CHI (2023*, 2024, 2025)
- NeurIPS (2025)
- IMWUT (2024)

‘*’ Indicates Special Recognition for Outstanding Reviews

Miscellaneous

University of Delaware Golf Team Athlete, Captain (2019-2020)	FALL 2016 – SPRING 2020
Community Loaves Volunteer Baker	2022-PRESENT
Blue Hen Golf Camp	SUMMER 2019
Fundraising for B+ Foundation for Pediatric Cancer; Reps 4 Kids Participant	FALL 2016 – FALL 2019
Volunteer Marshal at Omega Dubai Desert Classic/Ladies Masters	2012– 2015– 2020
