AASHAKA DESAI

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EDUCATION

University of Washington, Paul G. Allen School of CS and Engineering   SEATTLE, WA
Doctoral Student in Computer Science   2020 – PRESENT
Advised by Jennifer Mankoff and Richard Ladner

University of Delaware   NEWARK, DE
Bachelor of Science, double major in Computer Science and Cognitive Science, Cum Laude   MAY 2020
GPA: 3.86

HONORS & AWARDS

Jeff Dean & Heidi Hopper Fellowship Recipient (2020-2021)
LEAP Fellow (Fall 2020 – Present)
Steven Geracimous Memorial Award (2020)
Outstanding Achievement in Undergraduate Cognitive Science (2020)
Arthur Ashe Jr. Sports Scholar Award (2020)
CAA Randolph Inspiration Award (2020)
ACM Member, Inductee of Chi Alpha Sigma National College Athletes Honors Society

PAPERS

CONFERENCE PAPERS
ASL Citizen: A Community Sourced Dataset for Advancing Isolated Sign Language Recognition (to appear NeurIPS '23) – **A. Desai**, L. Berger, F. Minakov, V. Milan, C. Singh, K. Pumphrey, R. Ladner, H. Daumé III, A. Lu, N. Caselli, D. Bragg

Working at the Intersection of Race, Disability, and Accessibility (to appear ASSETS '23) – C. Harrington, **A. Desai**, A. Lewis, S. Moharana, A. Ross, J. Mankoff

Understanding and Enhancing Speechreading Experiences for Accessible Communication in an Online Context (CHI '23) – **A. Desai**, J. Mankoff, R. Ladner

EXTENDED ABSTRACTS, POSTERS & OTHER WORKS
Language Technology at the Margins: Designing for Fluidity in d/DHH Communication Accessibility (ASSETS '23 Doctoral Consortium) – **A. Desai**

Maintaining the Accessibility Ecosystem: a Multi-Stakeholder Analysis of Accessibility in Higher Education (to appear ASSETS '23) – K. Mack, N. Sidik, **A. Desai**, E. McDonnell, K. Mehta, C. Zhang, J. Mankoff

An Autoethnographic Case Study of Generative Artificial Intelligence's Utility for Accessibility (to appear ASSETS '23) – K. Glazko, M. Yamagami, **A. Desai**, K. Mack, V. Potluri, X. Xu, J. Mankoff

Enhancing Access to High Quality Tangible Information through Machine Embroidered Tactile Graphics (SCF Poster) – M. E. Seehorne, G. S-H Kim, **A. Desai**, M. Hofmann, J. Mankoff

Using Fiber Arts and Sonification to Improve Data Accessibility of Maker Spaces (CHI '22 Workshop) – **A. Desai**, V. Potluri, A. Lewis, D. Campos Zamora, J. Mankoff, R. Ladner

CURRENT RESEARCH

Multilingual Captioning for Accessibility
Formative inquiry of the experiences of d/DHH or disabled caption users in multilingual scenarios. A two part study that aims to offer empirical accounts of how these individuals navigate access, a map of the current state of multilingual captioning for accessibility, and a deep dive into the influence of culture, fluency, and literacy on caption design and use.

Sustainable and Scalable Sign Language Dictionaries
An exploration of how we might incorporate new signs into the vocabulary of a trained sign language dictionary with limited data and computational resources. Using different few-shot learning techniques to develop models that are scalable and sustainable in the context of language change.

Innovators with Insight
Qualitative study of the design activities of persons with disabilities who have innovated accessibility technology. Conducted semi-structured interviews with innovators to explore how their life and learning experiences have influenced their design choices, along with review of historical record using thematic analysis.

EMPLOYMENT

Microsoft Research   SEATTLE, WA
Research Intern; Advised by Danielle Bragg, Alex Lu, Hal Daumé III   SUMMER 2022 & 2023

- Analyze and clean a community curated isolated sign language (ISLR) dataset for dissemination
- Implement state-of-the-art supervised approaches for ISLR as benchmarks, along with unsupervised approaches to ISLR
- Frame ISLR applications grounded in needs and wants of DHH community
- Explore few-shot learning and representation learning techniques to support dictionary expansion

CSE 446/546: Machine Learning   SEATTLE, WA
Teaching Assistant   FALL 2021

- Explain core ML concepts to students during office hours and via online forum
- Create and grade homework assignments

Make4all Lab   SEATTLE, WA
Research Assistant   SUMMER 2021

- Review relevant literature, write reports
- Design projects and develop related study material and protocols
- Recruit and match undergraduates to projects and mentors

Speech Language Acquisition and Multilingualism Lab   NEWARK, DE
Research Assistant; Advised by Giovanna Morini   SPRING 2019 – SUMMER 2020

- Recruit participant and create animated stimuli for lab studies using Java & ShotCut
- Help analyze data by coding participant videos in SuperCoder and parsing SuperCoder files
- Develop 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

University of Delaware Women's Golf Team   NEWARK, DE
Captain   FALL 2019 – SPRING 2020
Scholarship Athlete   FALL 2016 – SPRING 2020

- Lead by example; work with team members to achieve common goals
- Display strong work ethic through rigorous year-round training
- Manage time and prioritize well, balancing full course load

RELEVANT COURSEWORK

Graduate Level: Deep Learning, Natural Language Processing, Mobile and Wireless Systems, Human-Computer Interaction, Data Visualization, Ethics in AI, Seminar in HCI & Accessibility, Intro to American Sign Language (101 – 103)

Undergraduate Level: Machine Learning, Artificial Intelligence, Computer Vision, Structure of Language, Introduction to Communication Disorders, Brain and Behavior, Elements of Cognitive Science

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 (beginner; learning)

Invited Talks and Panels

CS Next Grad School Prep Workshop (UW)   SPRING 2023
Presenter
- Understanding and Enhancing Speechreading Experiences for Accessible Communication Online

Race, Disability & Technology: A Cross-Campus Conversation (UW CREATE)   WINTER 2023
Panelist
- Multilingual Captioning Accessibility for d/DHH and Disabled Caption Users

HCDE 515: Accessibility and Inclusive Design (UW)   WINTER 2023
Guest Lecture for Dr. Coppola
- Understanding and Enhancing Speechreading Experiences for Accessible Communication Online

Additional Service and Outreach Efforts

CREATE Seminar Facilitator	FALL 2023
CHI Reviewer	2022–
Make4all Lab Meeting Coordinator	2022–
Undergrad mentoring:	
Karman Singh, Gene S-H Kim, Ellie Seehorne, David Martin, Claris Winston, Ben Kosa	
Care Committee Volunteer	PRESENT
Community Loaves Baker	PRESENT
UW Prospective Visit Days Volunteer	2022–
PAMS mentor	2023–
New Grad Mentor	2021–2022
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