

# AASHAKA DESAI

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## EDUCATION

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

*Doctoral Student in Computer Science*

*Advised by Jennifer Mankoff and 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

## HONORS & AWARDS

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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

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*Understanding and Enhancing Speechreading Experiences for Accessible Communication in an Online Context (In Submission to ASSETS '22)* – A. Desai, J. Mankoff, R. Ladner

*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

## RESEARCH

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### Embroidered Tactile Graphics

PRESENT

An exploration of the use of machine embroidery to create tactile graphics. We evaluated different embroidery stitches, patterns and techniques for tactile contrast. Based on our results, we are designing a tool to support creation interactive embroidered tactile graphics.

### Innovators with Insight

PRESENT

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.

## Speechreading Supports

IN SUBMISSION

Formative inquiry into speechreading needs of DHH users in videoconferencing context. We highlight technical, environmental and sociocultural factors that impact communication accessibility, explore the design space of speechreading supports and share considerations for the design future of speechreading technology.

## Number Crunching (SLAM Lab)

SUMMER 2019 – SUMMER 2020

Wrote software to analyze eye-gaze participant videos for experimental studies that use the Preferential Looking Procedure. It calculates target to distractor ratios for variety of trial types and study designs with capability of finetuning analysis using specific windows. Implemented a variation for data gathered using Tobii Eye-tracking software as well.

## Anomic Aphasia Project (Independent Study)

SUMMER 2019 – FALL 2019

Conducted review of literature in field of Augmentative and Alternative Communication devices persons with aphasia to identify gaps in literature. Devised experiment for data collection and algorithm to help with word recall using semantic networks, word vectors and clustering techniques.

## EMPLOYMENT

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### 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
- See Projects listed as Research

### Speech Language Acquisition and Multilingualism Lab

NEWARK, DE

*Research Assistant*

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
- See Projects under SLAM Lab

### 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

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*Graduate Level:* Deep Learning, Natural Language Processing, Mobile and Wireless Systems, Human-Computer Interaction, 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

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- 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)

## Additional Service and Outreach Efforts

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Undergrad mentees: Karman Singh (UW CSE)	SUMMER 2021-PRESENT
New Grad Mentor	2021-PRESENT
Care Committee Volunteer	2021
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

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