Ali Zaidi
Champaign, IL
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Education

Ph.D. in Computer Science **Defended February 2026**
University of Illinois, Urbana-Champaign
Advisors: Karrie Karahalios and Ranjitha Kumar
Thesis: Advancing Human-Centered AI in Workflows for Disability Advocacy and Decision-making

BS with honors in Computer Science **2020**
University of Wisconsin – Madison
Thesis: Verbal Authoring of Human-Robot Interactions Using Interaction Templates
Advisor: Bilge Mutlu

BS in Mathematics **2020**
University of Wisconsin – Madison

Research Experience

AI-Based Agent Assistance for Parent Advocates in Special Education **2024-Present**
University of Illinois, Urbana-Champaign (*Advisors: Karrie Karahalios, Tal August)*
Investigating current issues faced by parent advocates of children with special needs, and building/evaluated AI-based agents to address identified issues. Includes parent rehearsal tools, email assistants, and document summarizers powered by RAG-enhanced LLM systems.

FlightPath **2022-2024**
University of Illinois, Urbana-Champaign and OSF Hospital (*Advisors: Karrie Karahalios, Inki Kim, Adam Cross)*
Building clinician interfaces and evaluating both clinician and patient acceptance of deep learning models for objective measures of mild traumatic brain injury.

Building Reliable Home Management Systems of the Future **2022-2025**
University of Illinois, Urbana-Champaign (*Advisors: Karrie Karahalios, Indranil Gupta, Camille Cobb*)
Synthesizing design principles from qualitative analysis of user interactions with Smart IoT devices in the home and building/evaluating systems built with these design principles.

Learning custom word embeddings via feedback loops **2021-2023**
UserTesting (*Advisor: Ranjitha Kumar*)
Developed a novel feedback loop that generates custom word embeddings and deployed it as part of an analysis flow on a remote usability testing platform, enabling the platform to predict UX annotations in a user's own language.

App-Based Task Shortcuts for Virtual Assistants **2021**
University of Illinois, Urbana-Champaign (*Advisor: Ranjitha Kumar*)

Using Machine Learning and Natural Language Processing to train an agent for mobile voice assistants in mapping task shortcuts to relevant application UI screens.

Evaluating Smart Home Resolution Approaches to Routine Conflicts **2020-2022**
University of Illinois, Urbana-Champaign (*Advisors: Karrie Karahalios and Indy Gupta)*
Investigating the usability of Smart IoT devices for the home integrated with distributed systems principles for routine conflict resolution.

Conference Publications

[*In Submission]* Ali Zaidi, Alex Atcheson, Arianna F Pardo, Karrie Karahalios. *Supporting Parents in IEP Preparation through AI-assisted Rehearsal.*

[*CHI'26]* Ali Zaidi, Anna Karanika, Ti-Chung Cheng, Yi-Shyugan Chiang, Camille Cobb, Indranil Gupta, Karrie Karahalios. *Control in Context: How Smart Home Users Navigate Centralized and Per-device Schemes.* In ACM Conference on Human Factors in Computing Systems (CHI'26). Barcelona, Spain. April 2026.

[To appear, CSCW'26] Ali Zaidi, Jessica Jia-Wen Saw, Leigh Fu, Katherine Arneson, Inki Kim, Adam Cross, Karrie Karahalios. *Rethinking Objectivity in Clinical AI: A Qualitative Study of Concussion Evaluators.*

[DIS'25] Ali Zaidi, Karrie Karahalios. "*From Sociotechnical Gaps to Solutions: Designing AI Tools with Parents to Address Special Education Advocacy Barriers in IEP Processes".* In ACM Designing Interactive Systems Conference (DIS'25). Funchal, Portugal. July 2025.

[**UIST'23**] **Ali Zaidi,** Kelsey Turbeville, Kristijan Ivančić, Jason Moss, Jenny Gutierrez Villalobos, Aravind Sagar, Huiying Li, Charu Mehra, Sixuan Li, Scott Hutchins, and Ranjitha Kumar. 2023. "*Learning Custom Experience Ontologies via Embedding-based Feedback Loops*." In The 36th Annual ACM Symposium on User Interface Software and Technology. San Francisco, CA, USA. October –November 2023.

[**Ubicomp'23**] **Ali Zaidi**, Rui Yang, Vinay Koshy, Camille Cobb, Indranil Gupta, and Karrie Karahalios. *"A User-Centric Evaluation of Smart Home Resolution Approaches for Conflicts Between Routines."* Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies. Cancun, Mexico. October 2023.

[**UIST '21**] Deniz Arsan, **Ali Zaidi**, Aravind Sangar, Ranjitha Kumar. "*App-Based Task Shortcuts for Virtual Assistants."* 34th ACM Symposium on User Interface Software and Technology. Virtual. October 2021.

Patents

Kumar, Ranjitha, Kristijan Ivancic, Kelsey Elizabeth Turbeville, **Ali Hur Zaidi**, Jenny Gutierrez Villalobos, and Jason Matthew Moss. "*System and method for custom label embedding*." U.S. Patent Application 18/300,032, filed October 17, 2024.

Presentations and Talks

Conference Talk (DIS'25)	2025
Participatory AI Research & Practice Symposium	2025
Digital Computing for TBI Assessment, Diagnosis, and Management Workshop	2024
Conference Talk (UIST'23)	2023
Conference Talk (Ubicomp'23)	2023
Lightning Talk (UIST'21)	2021

Teaching Experience

CS 568: User-Centered Machine Learning Head Teaching Assistant.	2025, 2024, 2023
CS 105: Intro to Computing for Non-Technical Majors Teaching Assistant	2024
CS 409: The Art of Web Programming Graduate Teaching Assistant	2023, 2022, 2021
CS 416: Data Visualization Graduate Teaching Assistant	2022

Employment Experience

Course Redesign Assistant **2025**
University of Illinois (Urbana, IL)
Assisted faculty in redesigning CS105: Intro to Computing for Non-Technical Majors, changing student readings, homework, and lecture content to modernize content for an LLM-assisted course experience while ensuring students meet desired learning goals.

Machine Learning Researcher **2021-2023**
UserTesting (San Francisco, CA)
Worked as both an intern during summers and part time employee during the school year. Integrated a novel feedback loop that combines end-user feedback with vector space refinement algorithms to generate custom word embeddings into UserTesting's remote usability testing analysis platform with nearly 7 million user interactions over six months. Custom feedback loop system published and patented.

Software Engineering Intern **2020**
Microsoft (Redmond, WA)
Leveraged Windows release data from millions of devices to create a dashboard that provided actionable insights to developers as part of a company migration to a new release quality control engine, supervised by Vladimir Meshchaninov in the Release Automation and Monitoring Team.

Software Engineering Intern **2019**
Microsoft (Redmond, WA)
Developed an embedded sim profile switch application for shared enterprise devices and utilized Azure cloud services for creating an IoT dashboard to monitor devices, supervised by Sohail Hirani in the Storage, Things and Connectivity Team.

Undergraduate Technical Intern **2018**
Intel (Santa Clara, CA)
Used Intel RealSense Technologies, OpenGL, OpenCV, and TensorFlow to create a 3-dimensional facial recognition application as part of a proof-of-concept project, supervised by Moenes Iskarous in the Platform Analysis Center, within the Software and Services Group.

Honors and Awards

Graduate Student Outstanding Service Award	2025
WE CU Community Engaged Scholar	2025
Outstanding Teaching Assistant	2023
Teachers Ranked as Excellent by Students	2023,2024
NSF Graduate Research Fellowship Honorable Mention	2022
Trewartha Senior Honors Thesis Grant	2019
David Dewitt Undergraduate Scholarship	2019
William F. Vilas Scholarship	2018

Professional Service and Volunteering

Reviewer (ACM *DIS* 2025)	2025
UIUC Senator	2024-Present
Reviewer (ACM *IMWUT*)	2024
Reviewer (ACM *CSCW*)	2023, 2024, 2025
Reviewer (*ACM CHI*)	2022, 2023, 2024, 2025
Students Advising on Graduate Education Advisory Board Member	2023-Present
CS Graduate Student Organization President	2023-Present
Engineering Graduate Student Advisory Council Member	2022-2023
CS Graduate Student Organization Treasurer	2021-2022
Computer Science Student Leadership Council	2021-Present
Undergraduate Mentorship	2021-Present

Skills

Java, C/C++, C#, Python, SQL, HTML/CSS, JavaScript Programming
Experienced in using neural models, semantic parsing, and phrase structure-parsing for NLP
Generative AI agent building experience, specializing in Large Language Models
Working proficiency of OpenCV, OpenGL, PyTorch, TensorFlow, and NumPy libraries
Machine learning for computer vision and NLP tasks
Bayesian and Statistical model generation
Mixed-methods analysis, with expertise in qualitative methods