Ali Zaidi
Champaign, IL
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Education

Ph.D. Candidate in Computer Science **Expected 2026**
University of Illinois, Urbana-Champaign
Advisors: Karrie Karahalios and Ranjitha Kumar
Research Focus: HCI, AI/ML

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 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 systems to address identified issues.

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 using AR/VR.

Building Reliable Home Management Systems of the Future **2022-Present**
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 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, Karrie Karahalios. *From Sociotechnical Gaps to Solutions: Designing AI Tools with Parents to Address Special Education Advocacy Barriers in IEP Processes*

[*In Submission*] Ali Zaidi, Jessica Jia-Wen Saw, Leigh Fu, Katherine Arneson, Inki Kim, Adam Cross, Karrie Karahalios. *Designing Clinical Decision Support: Eliciting Concussion Evaluation Workflows for Collaborative Healthcare Technologies.*

[**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

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**

Undergraduate Research Symposium **2018**

Teaching Experience

CS 568: User-Centered Machine Learning Head Teaching Assistant 2025

CS 105: Intro to Computing for Non-Technical Majors Teaching Assistant 2024

CS 568: User-Centered Machine Learning Head Teaching Assistant 2024

CS 409: The Art of Web Programming Graduate Teaching Assistant 2023

CS 568: User-Centered Machine Learning Head Teaching Assistant 2023

CS 409: The Art of Web Programming Head Teaching Assistant 2022

CS 416: Data Visualization Graduate Teaching Assistant 2022

CS 498 RK: The Art of Web Programming Graduate Teaching Assistant 2021

Employment Experience

Machine Learning Research Intern **2022**
UserTesting (San Francisco, CA)
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.

Machine Learning Research Intern **2021**
UserTesting (San Francisco, CA)
Used autoencoders to develop joint visual and textual embedding projection spaces for application screens to run nearest neighbor queries for intent mapping of application screens.

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

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* 2025) **2024**

Reviewer (ACM *CSCW 2025)* **2024**

Reviewer (ACM *CSCW 2024*) **2024**

Reviewer (*ACM CHI 2024*) **2023**

Students Advising on Graduate Education Advisory Board Member **2023-Present**

CS Graduate Student Organization President **2023-Present**

Reviewer (*ACM CHI 2023*) **2022**

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
Working proficiency of OpenCV, OpenGL, TensorFlow, and NumPy libraries
Machine learning for computer vision and NLP tasks
Bayesian and Statistical model generation