

SMIT DESAI

(+1)(217) 800-1652 \diamond smitad2@illinois.edu
204 S 5th St., Champaign, 61820, IL
smitdesai.net

EDUCATION

University of Illinois, Urbana-Champaign

Doctor of Philosophy
School of Information Sciences

August 2018 - Present

Overall GPA: 4/4

University of Illinois, Urbana-Champaign

Master of Science in Information Management
School of Information Sciences

August 2016 - May 2018

Overall GPA: 4/4

Gujarat Technological University, India

Bachelors in Computer Engineering
Department of Computer Engineering

August 2011 - May 2015

Overall GPA: 8/10

RESEARCH EXPERIENCE

Research Assistant, ACTION Lab

University of Illinois, Urbana-Champaign

August 2019 - Present

Advisor: Dr. Jessie Chin

- Understanding perceptions of using Voice User interfaces (VUIs) in older adults and people with disabilities with the help of co-design activities and participatory design.
- Developing user-centered voice agents, using Dialogflow, to fulfill older adults' needs for physical activity and informal learning to support their goals of healthy aging in place.
- Comparing older adults' performance at using VUIs with younger adults in user studies to dispel unfounded myths and challenge stereotypes surrounding older adults' use of technologies.

Research Assistant, School of Information Sciences

University of Illinois, Urbana-Champaign

August 2018 - Present

Advisor: Dr. Michael Twidale

- Conducting exploratory literature review on Conversational Agents (CAs) guided by PRISMA with a focus on usability.
- Designing and implementing methodologies, including semi-structured interviews and metaphor analysis, to understand the mental models of people interacting with smart speakers like Amazon Echo and Google Home.
- Devising a framework for Metaphor Contextualization in Conversational Agents to examine the perceptions of end-users, developers, designers, and researchers from a holistic metaphorical lens to uncover hidden biases and latent stereotypes.
- Applying metaphor analysis to Large Language Models (LLMs) to understand how people perceive persona-fluid generative agents.

Research Assistant, School of Information Sciences

University of Illinois, Urbana-Champaign

January 2018 - May 2018

Advisor: Dr. Ian Brooks

- Worked on developing and designing IPLAN (a web-based data query system) to track health statistics of Illinois Counties for Illinois Department of Public Health.
- Conducted low-fidelity prototyping using paper prototypes and Wizard of Oz, and high-fidelity prototyping using Sketch.

Research Assistant, Micro and Nano Technology Lab

University of Illinois, Urbana-Champaign

September 2016 - December 2017

Advisor: Dr. Ian Brooks

- Worked on developing new tools to enable rapid detection, identification, and reporting of infectious viral and microbial pathogens in a wide variety of point-of-care applications that impact human and animal health.
- Responsibilities included design of web-interface, web-architecture, and prototyping.
- Project was funded by NSF and Motorola.

INDUSTRY EXPERIENCE

Educational Testing Service (ETS) AI Labs

June 2022 - August 2022

Summer Research Intern

Supervisor: Dr. Elham Beheshti

- Conducting user experience research around designing learning solutions for English learner's speaking proficiency
- Developing conversational agents to help new hires practice spoken English in a professional setting.

John Deere Technology & Innovation Center

May 2017 - December 2017

User Experience Engineering Intern

Supervisor: Dr. Cale Darling

- Worked on projects including building voice user interface for Amazon Alexa and Google Home, and Virtual Reality(VR) applications using Unity. Conducted user research with users owning John Deere equipment.
- Helped in making story-boards, wire-frames, and interfaces for John Deeres mobile applications.

Microsoft

Jan 2014 - Jan 2015

Microsoft Student Partner

- Delivered seminars and information sessions to promote computer literacy in low-income groups. Also, I taught basic computing skills to people with no access to computers.

PEER-REVIEWED PUBLICATIONS

16. **Desai, S.**, Hu, X., Lundy, M., & Chin, J. (2023). Using Experience-Based Participatory Approach to Design Interactive Voice User Interfaces for Delivering Physical Activity Programs with Older Adults. ACM HAI'23:11th International Conference on Human-Agent Interaction.

<https://doi.org/10.1145/3623809.3623827>

15. **Desai, S.**, & Chin, J. (2023). OK Google, Lets Learn: Using Voice User Interfaces for Informal Self-Regulated Learning of Health Topics among Younger and Older Adults. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI23).

<https://doi.org/10.1145/3544548.3581507>

14. **Desai, S.** & Twidale, M. (2023). Metaphors in Voice User Interfaces: A Slippery Fish. ACM Trans. Comput.-Hum. Interact (TOCHI). 30, 6, Article 89 (December 2023), 37 pages.

<https://doi.org/10.1145/3609326>

13. **Desai, S.***, Lundy, M.* & Chin, J. (2023). "A Painless Way to Learn:" Designing an Interactive Storytelling Voice User Interface to Engage Older Adults in Informal Health Information Learning. CUI 2023 - 5th ACM Conference on Conversational User Interfaces.

<https://doi.org/10.1145/3571884.3597141>

**co-first authors*

12. **Desai, S.**, Sharma, T. & Saha, P. (2023). Using ChatGPT in HCI Research: A Trioethnography. CUI 2023 - 5th ACM Conference on Conversational User Interfaces.

<https://doi.org/10.1145/3571884.3603755>

11. **Desai, S.** & Twidale, M. (2023). Using Playful Metaphors to Conceptualize Practical Use of ChatGPT: An Autoethnography. 86th Annual Meeting of the Association for Information Science and Technology.
<https://doi.org/10.1002/pras.2.816>
10. Lundy, M., **Desai, S.**, & Chin, J. (2023). Bridging the Gap Between Designers and Users: Co-designing Health-Related Voice User Interface Experiences with Older Adults. 2023 ALISE Annual Conference.
<https://doi.org/10.21900/j.alise.2023.1377>
9. Chin, J.*, **Desai, S.***, Lin, S., & Meija S. (Accepted). Like My Aunt Dorothy: Effects of Conversational Styles on Perceptions, Acceptance and Metaphorical Descriptions of Voice Assistants during Later Adulthood. Proceedings of the ACM on Human-Computer Interaction (CSCW).
**co-first authors*
8. **Desai, S.** & Twidale, M. (2022) Is Alexa like a computer? A search engine? A friend? A silly child? Yes. CUI 2022 - 4th ACM Conference on Conversational User Interfaces.
<https://doi.org/10.1145/3543829.3544535>
7. **Desai, S.**, & Chin, J. (2021). Hey Google, Can You Help Me Learn? CUI 2021 - 3rd Conference on Conversational User Interfaces, 14. <https://doi.org/10.1145/3469595.3469601>
6. Chin, J.*, & **Desai, S.*** (2021). Being a Nice Partner: The Effects of Age and Interaction Types on the Perceived Social Abilities of Conversational Agents. TMS (American Psychological Associations Conference on Technology, Mind, Society) Proceedings 2021. <https://doi.org/10.1037/tms0000027>
**co-first authors*
5. **Desai, S.** & Chin, J. (2020). An explorative analysis of the feasibility of implementing metacognitive strategies in self-regulated learning with the conversational agents. In Proceedings of the 64th International Annual Meeting of the Human Factors and Ergonomics Society.
4. Chen, W., Yu, H., Sun, F., Ornob, A., Brisbin, R., Ganguli, A., Vemuri, V., Strzebonski, P., Cui, G., Allen, K. J., **Desai, S. A.**, Lin, W., Nash, D. M., Hirschberg, D. L., Brooks, I., Bashir, R., & Cunningham, B. T. (2017). Mobile Platform for Multiplexed Detection and Differentiation of Disease-Specific Nucleic Acid Sequences, Using Microfluidic Loop-Mediated Isothermal Amplification and Smartphone Detection. Analytical Chemistry, 89(21), 1121911226. <https://doi.org/10.1021/acs.analchem.7b02478>
3. Sun, F., Chen, W., Yu, H., Omob, A., Brisbin, R., Ganguli, A., Vemuri, V., Strzebonski, P., Cui, G., Allen, K. J., **Desai, S. A.**, Lin, W., Nash, D. M., Hirschberg, D. L., Brooks, I., Bashir, R., & Cunningham, B. T. (2017). Multiplexed detection of infectious diseases with microfluidic loop-mediated isothermal amplification and a smartphone. 2017 IEEE Healthcare Innovations and Point of Care Technologies (HI-POCT), 241244. <https://doi.org/10.1109/HIC.2017.8227629>
2. **Desai, S.** (2017). Segmentation and Recognition of Fingers Using Microsoft Kinect. In N. Modi, P. Verma, B. Trivedi (Eds.), Proceedings of International Conference on Communication and Networks (pp. 4553). Springer.
1. **Desai, S.**, & Desai, A. (2017). Human Computer Interaction Through Hand Gestures for Home Automation Using Microsoft Kinect. In N. Modi, P. Verma, B. Trivedi (Eds.), Proceedings of International Conference on Communication and Networks (pp. 1929). Springer.

OTHER PUBLICATIONS

3. **Desai, S.**, Wei, C., Sin, J., Dubiel, M., Zargham, N., Ahire, S., Porcheron, M., Kuzminykh, A., Lee, M., Candello, H., Fischer, J., Munteanu, C., Cowan, B. R. (Accepted). CUI@CHI 2024: Building Trust in CUIs: From Design to Deployment. In Extended Abstracts of the 2024 CHI Conference on

Human Factors in Computing Systems (CHI EA '24).
<https://doi.org/10.1145/3613905.3636287>

2. **Desai, S.** (2023) Firing the Assistant: Designing Multi-Metaphorical Voice User Interfaces. Doctoral Consortium at CUI 2023 - 5th ACM Conference on Conversational User Interfaces, Eindhoven, Netherlands.

1. **Desai, S.** & Chin, J. (2023) Open Issues in Designing VUIs to Support Older Adults Seeking Health Information. CUI@CHI: Inclusive Design of CUIs Across Modalities and Mobilities, April 23, 2023, Hamburg, Germany.

PRESENTATIONS

11. **Desai, S.**, & Twidale, M. (2023). Messy Metaphors in Voice Interfaces: A Playful (and completely serious) Perspective. Oral presentation at the Research Showcase at the School of Information Sciences, Urbana, Illinois, November.

10. **Desai, S.**, Lundy, M., & Chin, J. (2022). Designing for Engaging Health Information Learning: Voice User Interfaces, Older Adults, and Interactive Storytelling. Oral presentation at the Research Showcase at the School of Information Sciences, Urbana, Illinois, November.

9. Meja, S., Chin, J., Washington, F., **Desai, S.**, Ramesh, D., Deshpande, F., & Hong, S. (2022). Relaxation elements within a home environment and older adults' socioemotional experiences of challenging tasks. *Innovation in Aging*.

8. Meja, S., Chin, J., **Desai, S.**, Washington, F., Ramesh, D., Deshpande, F., & Dash, S. (2022). The effects of environment-induced relaxation on cognitive foraging under stress in midlife and beyond. *Innovation in Aging*.

7. **Desai, S.**, & Chin, J. (2021). Using Conversational Agents as Informal Learning Partners. Oral presentation at the Research Showcase at the School of Information Sciences, Urbana, Illinois, October.

6. **Desai, S.** & Twidale, M. (2021). Hey Google, What Shall I Compare Thee to? Poster presentation at the Research Showcase at the School of Information Sciences, Urbana, Illinois, October.

5. Chin, J. & **Desai, S.** (2021). Designing conversational agents to support self-regulated learning for older adults. In S. Meija (Chair), *Health Technology and Health Behavior*. Symposium at the Gerontological Society of America (GSA) 2021 Annual Scientific Meeting Phoenix, AZ, 10-14 November.

4. Quinn, K., Chin, J., **Desai, S.**, O'Connell, C., Leiser, S., Marquez, D. & Muramatsu, D. (2021). Privacy and Smart Speakers in Research with Older Adults. Paper presentation at the Annual Scientific Meeting of the Gerontological Society of America, Phoenix, AZ, 10-14 November.

3. O'Connell, C., Quinn, K., Marquez, D., Chin, J., Muramatsu, N., Leiser, S., Gradishar, J., & **Desai, S.** (2021). Accommodating Communication with Conversational Agents: Examining the Perceptions and Behaviors of Older Adults When Using Voice Assistant Technology. Paper presentation at the 22nd Annual meeting of the Association of Internet Researchers, Online, October.

2. Hur P., Twidale M., **Desai, S.**, Bosch N. (2019). Towards Understanding User Mental Models of Troubleshooting Voice-User Interfaces. Poster presentation at the Research Showcase at the School of Information Sciences, Urbana, Illinois, October.

1. Chin, J., **Desai, S.**, Lopez E. (2019). Using conversational agents to build accessible and innovative delivery of healthcare service to support Aging-in-Place. Poster presentation at the Research Showcase at the School of Information Sciences, Urbana, Illinois, October.

ACADEMIC AWARDS & GRANTS

5. Two Special recognitions for outstanding review at CHI'24.
4. Houchens Fellowship (2023).
3. Special recognition for outstanding review at CUI'23.
2. Received Gary Marsden Travel Award from ACM SIGCHI (2023).
1. Received Information Systems/ Technology award for outstanding achievement in Information Science and Technology by the School of Information Sciences at the University of Illinois in 2018.

REFeree, JOURNAL & CONFERENCES

6. International Journal of Human-Computer Studies (IJHCS)
5. ACM Conference on Human Factors in Computing Systems (CHI)
4. ACM Conference on Conversational User Interfaces (CUI)
3. The Journal of the Association for Information Science and Technology (JASIST)
2. Behavior & Information Technology
1. Universal Access in the Information Society

PROFESSIONAL & SOCIAL SERVICES

6. Lead organizer of "CUI@CHI 2024: Building Trust in CUIs: From Design to Deployment" at ACM CHI'24.
5. Provocation Papers Track Co-Chair @ ACM SIGCHI Conversational User Interfaces (CUI'24), Luxembourg (2024)
4. Treasurer for ACM-Women Chapter @ University of Illinois (2019-2020)
3. Vice President of Special Libraries Association chapter @ University of Illinois (2016-2017)
2. Co-Founder of National Youth Conclave, Surat, India (2015)
1. Elected Vice President of the Student Body @ Gujarat Technological University (2012-2014)

INVITED LECTURES & PANELS

9. Co-designing Voice User Interfaces with older adults (2023). Workshop on Co-Researching with the Humans-In-The-Loop: Using Participatory Methods, Research & Co-Design in HRI at the 15th International Conference on Social Robotics.
8. Designing Persona-Fluid Voice User Interfaces. (2024). University of Washington, Change Seminar.
7. Voice User Interface Design Process. (2022). Class on Entrepreneurial IT Design. School of Information Sciences, UIUC.
6. Metaphors and Mental Models of ChatGPT use. (2023). Demonstrations of Research on Teaching & Learning with ChatGPT @ UIUC College of Education.
5. Voice User Interface Design Process. (2022). Class on Entrepreneurial IT Design. School of Information Sciences, UIUC.
4. Designing Voice User Interfaces for Informal Learning. (2022). Class on current topics in Human-Computer Interaction. School of Information Sciences, UIUC.

3. Mental Models in HCI. (2022). Fall semester colloquium. UIUC.
2. Prototyping Voice User Interfaces. (2021). Class on Museum Informatics. School of Information Sciences, UIUC.
1. Prototyping methods in HCI. (2021). Class on Cognition in the Wild. School of Information Sciences, UIUC.

RESEARCH VISITS

1. University of Luxembourg
Collaborators: Prof. Luis A. Leiva & Dr. Mateusz Dubiel

Feb 2024

TEACHING EXPERIENCE

4. Entrepreneurial IT Design (Fall 2021, Fall 2022, Fall 2023) - Rated Excellent
3. Museum Informatics (Spring, 2021)
2. Research Design (Summer, 2020)
1. Human-Centered Information Systems (Spring, 2020)

TECHNICAL STRENGTHS

Programming Skills	C/C++, HTML, CSS, JAVA, Python, R, JS.
Design Skills	Web Design, Phone Application Design, Conversational Design.
Tools	Sketch, Figma, Invision, R Studio, Adobe Suite, Dialogflow.