

Mahika Phutane

mahika@cs.cornell.edu • www.mahikaphutane.com

Research interests

Human-Computer Interaction, Accessibility, Human-Centered NLP, Voice Interfaces

Education

- 2020 – Present **Cornell University**
PhD, Computer Science
Committee: Dr. Aditya Vashistha, Dr. Nicola Dell, Dr. Tapo Bhattacharjee
- 2015 – 2020 **University of Toronto**
BSc, Computer Science
Additional Major: Communication, Culture, Information, and Technology (CCIT)
Mentors: Dr. Cosmin Munteanu, Dr. Rhonda McEwen, Dr. Daniel Zingaro
- 2018 **Nanyang Technological University** – Singapore
Summer in Communication, Design, & Film Studies

Publications

- 2024 Jiang L., Jung C., **Phutane M.**, Stangl A., Azenkot S. *“It’s Kind of Context Dependent”: Understanding Blind and Low Vision People’s Video Accessibility Preferences Across Viewing Scenarios.*
ACM Conference on Human Factors in Computing (CHI ’24) [\[link\]](#)
- 2023 **Phutane M.**, Chen N., Jung C., Azenkot S. *Speaking with My Screen Reader: Using Audio Fictions to Explore Conversational Access to Interfaces.*
ACM Conference on Computers and Accessibility (ASSETS ’23) [\[link\]](#)
- 2023 Jiang L., **Phutane M.**, Azenkot S. *Beyond Audio Description: Exploring 360° Video Accessibility with Blind and Low Vision Users Through Collaborative Creation.*
ACM Conference on Computers and Accessibility (ASSETS ’23) [\[link\]](#)
- 2023 Zhao Y., **Phutane M.**, Singh S., Lepecki F., Zhou W., McEwen R., Zihayat M. *Bridging the Divide: A Comparative Analysis of the Discourse on Anxiety in Academic Research, Social Media, and Blogging Platforms* [In Review].

- 2022 **Phutane M.**, Wright J., Castro B., Shi L., Stern S., Lawson H., Azenkot S. *Tactile Materials in Practice: Understanding the Experiences of Teachers of the Visually Impaired*. ACM Transactions on Accessible Computing, 15(3), 1-34. (TACCESS '22). [\[link\]](#)
- 2022 Heung S., **Phutane M.**, Azenkot S., Marathe M., Vashistha A. *Nothing Micro About It: Examining Ableist Microaggressions*. ACM Conference on Computers and Accessibility (ASSETS '22). [\[link\]](#)
- 2021 Singhal T., **Phutane, M.** *Elevating Haptics: An Accessible and Contactless Elevator Concept with Tactile Mid-Air Controls*. ACM Extended Abstracts on Human Factors in Computing (CHI EA '21). [\[link\]](#)
- 2021 Hartel, J., **Phutane, M.**, Posa, S., Shi, S., Xu, A., & Bradshaw, S. *Somewhere Over the Rainbow: The Use of Color in the Draw-and-Write Technique*. Visual Methodologies, 8(1), 16 - 36. [in press]

Teaching experience

- Spring 2023 **Cornell Tech.** Teaching Assistant.
- Spring 2022 INFO 5305: User Experience and User Research Methods.
Held office hours, created supplemental lecture materials, led grading sessions
Prof: Dr. Shiri Azenkot
- Spring 2020 – **University of Toronto.** Teaching Assistant.
Spring 2016 CSC263: Data Structures and Analysis
CSC236: Introduction to Computational Theory
CSC148: Introduction to Computer Science
Profs: Dr. Daniel Zingaro, Dr. Andrew Petersen, Dr. Arnold Rosenbloom

Honors and Fellowships

- 2023 Digital Life Initiative Doctoral Fellowship. *\$5000 in research funding*
- 2023 Siegel Public Interest Tech Impact Fellowship. *\$10,000 in stipend*
- 2020 Dennis Washington Graduate Fellowship. *\$120,000*
Awarded for academic excellence and strength of character in face of adversity
Full support for 5 years, including tuition, health insurance, and stipend
[Appeared in Wall Street Journal](#)
- 2020 Cornell Computer Science Department Fellowship. *\$36,750*
First year support awarded for outstanding application & exceptional promise

- 2017 Jackman Humanities Institute Scholar-in-Residence. \$1,000
Intensive summer residence fellowship for social science research
Curated an [Art Exhibition](#) to share research findings
- 2017 Hacking Arts: First Place. MIT Media Lab. \$2,500
- 2016 Horatio Alger Scholarship. \$5,000

Professional experience

- 2024 – Present **Microsoft Research India.** Bengaluru, India
PhD Research Intern
- 2023 – 2024 **NYC Mayor’s Office of People with Disabilities.** New York, NY
Academic Fellow
 Creating an interactive AI assistant/chatbot to facilitate communication between the NYC government website and individuals with disabilities.
- 2018 – 2019 **Modiface, L’Oreal Group.** Toronto, Canada
AR Software Engineer

Mentorship

- 2024 Ananya Seelam, Research Assistant, *Cornell*
- 2024 Krystal Ohuabunwa, Milstein Scholar, *Cornell*
- 2024 Joy Alemu, Milstein Scholar, *Cornell*
- 2022 Cyrus West, Research Assistant, *Cornell*
- 2021 Ayush Srinivas, Lumiere Research Scholar
- 2021 Michael Ye, NSF Research Experience for Undergraduates, *Cornell Tech*
- 2019 – 2020 Felipe Lepecki, Research Assistant, *U Toronto*

Service and Leadership

- 2024 **Milstein Program in Technology and Humanity,** Research Mentor
 Advised Milstein undergraduate scholars on independent research projects and collaborations with local NGOs.
- 2021 **NSF Undergraduate Research Program,** Research Mentor
 Supported a NSF REU Site with Dr. Shiri Azenkot (Cornell Tech), Dr. Steven Fiener (Columbia), and Dr. Brian Smith (Columbia), led a lecture series of good research practice and methods, and mentored upcoming undergraduate researchers.
- 2021 **XR Access Research Seminar,** Co-Organizer
- 2021 – 2023 **CS PhD Admissions Committee,** Application Reviewer

Reviewing

2024	ACM Computing and Sustainable Societies (COMPASS)
2024	ACM SIGCHI Conversational User Interfaces (CUI)
2024	ACM SIGCHI Designing Interactive Systems (DIS)
2021 – 2024	ACM Human Factors in Computing Systems (CHI)
2022	ACM Interaction Design and Children (IDC)
2022	ACM Conference on Computer Supported Cooperative Work (CSCW)
2021 – 2022	Journal of Transactions on Accessible Computing (TACCESS)

Media & Press

2022	Online microaggressions strongly impact disabled users. <i>Cornell Chronicle</i> . [link]
2021	Maestro: An AI-guided vocal coach. <i>Google Magenta</i> . [link]
2020	An accessible solution to slowing the spread of COVID. <i>U Waterloo News</i> [link]
2020	A Touchless 2020. <i>Yahoo News</i> . [link]
2020	Scholarship gives former UTM student the push to strive ... <i>U Toronto News</i> [link]
2020	Richmond student wins top North American scholarship. <i>Richmond News</i> [link]

Technical Skills

Programming:

Python, Java, C++, Objective C (iOS), R, Full-Stack Development, Unity

Research Methods:

Interviews, Survey, Contextual Inquiry, Ethnography, Diary Studies, Wizard-of-Oz, Thematic Analysis, Speculative Research, User-Centered Design

Design & Prototyping:

Storyboarding, Wireframing, Sketching, Photoshop, Illustrator, Premiere, Audition, Sound Engineering

AI Topics and Tools:

Data Mining, Feature Extraction, Topic Modelling, TensorFlow, PyTorch, Numpy, Pandas, Jupyter, Natural Language Toolkit, Hugging Face