

# Mahika Phutane

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## Research interests

Human-Computer Interaction, Accessibility, Voice Assistants, AI-Mediated Access

## Education

- 2020 – Present    **Cornell University**  
PhD, Computer Science  
Committee: Dr. Shiri Azenkot, Dr. Aditya Vashistha, Dr. Nicki 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

- 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 '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]

## Technical Skills

### Programming:

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

### 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 Tools and Topics

TensorFlow, PyTorch, Jupyter, Data Mining, Text Analytics, Natural Language Processing (NLP), Neural Networks

## 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

## 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  
*Prof: Dr. Daniel Zingaro, Dr. Andrew Petersen, Dr. Arnold Rosenbloom*

## Professional experience

- Summer 2023 - **NYC Mayor’s Office of People with Disabilities.** New York, NY  
Present *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*

## Media & Press

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