Victor Nikhil Antony

vantony1@jhu.edu ▪ https://vantony1.github.io/ ▪ Google Scholar

Research Overview

My research, situated at the intersection of HRI, AI and Design, focuses on enhancing human-robot interactions to support health and well-being. Specifically, I design, develop and evaluate minimal robots that support people's well-being. My work emphasizes situated, long-term, "in the wild" studies to gain grounded understanding of human-robot interaction paradigms.

Keywords: Human-Robot Interaction, Human-Centered AI, Social Robotics, Generative AI

Education

Doctor of Philosophy in Computer Science, *Johns Hopkins University* **August 2021 — Present**

- Advised by Dr. **Chien-Ming Huang** and Dr. **Suchi Saria**

Master of Science in Engineering (Computer Science), *Johns Hopkins University* **May 2024**

Bachelor of Science in Computer Science, University of Rochester **May 2021**

- Advised by Dr. **Ehsan Hoque** and Dr. **Zhen Bai**

Publications

Under Review

Victor Nikhil Antony*, Zhili Gong*, Guanchen Li, Clara Jeon and Chien-Ming Huang – *Lantern: A Minimalist Robotic Object Platform* **[Under review]** *equal contribution **2024**

Sally Cao, Jiwon Moon, Amama Mahmood, **Victor Nikhil Antony**, Ziang Xiao, Anqi Liu, and Chien-Ming Huang **–** *"Let Me Finish My Thought'": Interruption Handling for Conversational Robots* **[Under review,** arXiv**].** **2024**

Published

Victor Nikhil Antony, Clara Jeon, Jiasheng Li, Ge Gao, Huiashu Peng, Anastasia Ostrowski and Chien-Ming Huang - *The Design of On-Body Robots for Older Adults. IEEE/ACM International Conference on Human-Robot Interaction (HRI'25)* **2025**

Victor Nikhil Antony, Maia Stiber and Chien-Ming Huang - *Xpress: Generating Dynamic, Context-Aware Robot Facial Expressions Using Language Models. IEEE/ACM International Conference on Human-Robot Interaction (HRI'25)* **2025**

Amama Mahmood, Shiye Cao, Maia Stiber, **Victor Nikhil Antony**, and Chien-Ming Huang - *Voice Assistants for Health Self-Management: Designing for and with Older Adults. ACM CHI conference on Human Factors in Computing Systems (CHI'25)* **[**arXiv**]** **2025**

Victor Nikhil Antony, Mengchi Li, Shu-Han Lin, Junxin Li and Chien-Ming Huang - *Social Robots for Sleep Health: A Scoping Review*. International Journal of Social Robotics **[**arXiv**]** **2025**

Victor Nikhil Antony and Chien-Ming Huang - *ID. 8: Co-Creating visual stories with Generative AI*. ACM Transactions on Interactive Intelligent Systems (TIIS) **2024**

Ulas Karli, Juo-Tung Chen, **Victor Nikhil Antony** and Chien-Ming Huang - *Alchemist: LLM-Aided End-User Development of Robot Application. ACM/IEEE International Conference on Human-Robot Interaction(HRI)* **2024**

Victor Nikhil Antony*, Sue Min Cho* and Chien-Ming Huang - *Co-designing with older adults, for older adults: robots to promote physical activity*. ACM/IEEE International Conference on Human-Robot Interaction*(HRI)* **2023**

Kurtis Haut, Caleb Wohn, **Victor Nikhil Antony,** Aidan Goldfarb, Melissa Welsh, Dillanie Sumanthiran, M Rafayet Ali, Ehsan Hoque - *Demographic feature isolation for bias research using deepfakes*. ACM International Conference on Multimedia **2022**

Wasifur Rahman, Sangwu Lee, Md Saiful Islam, **Victor Nikhil Antony**, Harshil Ratnu, Mohammad Rafayet Ali, Abdullah Al Mamun, Ellen Wagner, Stella Jensen-Roberts, Emma Waddell, Taylor Myers, Meghan Pawlik, Julia Soto, Madeleine Coffey, Aayush Sarkar, Ruth Schneider, Christopher Tarolli, Karlo Lizarraga, Jamie Adams, Max A Little, E Ray Dorsey, Ehsan Hoque - *Detecting Parkinson's disease using a web-based speech task: Observational study*. Journal of medical Internet research **2021**

Workshop Publications

Victor Nikhil Antony and Chien-Ming Huang - *Designing Social Robots that Engage Older Adults in Exercise: A Case Study*. HRI 2024 Workshop on HRI for Aging in Place **2024**

Victor Nikhil Antony, Adira Blumenthal, Ziyue Qiu, Ashely Tenesaca, Wanyin Hu, Zhen Bai - *Projection-Based AR for Hearing Parent-Deaf Child Communication*. Frameless **2020**

Research/Work Experience

Research Assistant, *Johns Hopkins University, Intuitive Computing Lab* **August 2021 — Present**

- Currently exploring the design of minimal, robotic objects to support health and well-being through situated interactions to foster positive daily habits.

Research Assistant, *University of Rochester, Human-Computer Interaction Lab* **May 2020 — May 2021**

- Employed machine learning techniques to enable remote diagnosis of Parkinson's disease via an online platform to lower barriers to healthcare.

Research Assistant, *University of Rochester, Inter-Play Lab* **June 2020 — April 2021**

- Developed a projection-based augmented reality prototype to measure its impact on seamless ASL acquisition and communication between hearing parents and deaf/hard-of-hearing children through near-object ASL video projection during play sessions.

Machine Learning Intern, *Tensorflow, Google Summer of Code*. **May 2019 — Sept 2019**

- Implemented efficient traditional machine learning algorithms in Swift for the beta Swift for Tensorflow (S4TF) framework.

Teaching and Mentoring

Teaching Assistant, *Johns Hopkins University* **Fall 2023**

- Graded and held office hours EN.601. 490/690 **Introduction to Human-Computer Interaction**
- Guest lecture on Participatory Design

Teaching Assistant, *Johns Hopkins University* **Spring 2023/2025**

- Graded and held office hours EN.601.491/691 **Human-Robot Interaction**

Student Mentor, *Johns Hopkins University* **2021-present**

- Mentored 5 undergraduate and 1 graduate student at Johns Hopkins University
- Currently mentoring 2 undergraduate and 2 graduate students at Johns Hopkins University for research projects to support health and well-being

Service

Peer Reviewer **2022 — Present**

- Peer reviewed for conferences (HRI, CHI, ICRA) and journals (THRI, IJSR, PLOS Digital Health)

Member of Organizing Committee for AAAI Fall Symposium of AI for Aging in Place **2024**

- Served as the publicity chair for a AAAI symposium aimed at bringing together researchers working on AI technologies to support aging in place

Facilitator PhD Mentor Hour **Fall 2022-23**

- Facilitated two mentor hour sessions to connect junior and senior PhD students for peer guidance