

Sanjana Mendu

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Education

Pennsylvania State University

Ph.D. in Informatics | Advisor: Saeed Abdullah

University Park, Pennsylvania

Expected May 2024

University of Virginia

M.S. in Systems & Information Engineering | Advisor: Laura Barnes

Charlottesville, Virginia

May 2020

B.S. in Computer Science

May 2018

Professional Experience

NASA Langley Research Center

Research Directorate Intern

Hampton, VA

2016

- Designed human-in-the-loop air traffic detection software for semi-autonomous aircraft system
- Co-developed decision-level Bayesian fusion algorithm that improved accuracy of object-tracking results from standard computer vision methods

Research Experience

Graduate Research Assistant

Wellbeing Health and Innovation Lab (led by Dr. Saeed Abdullah)

Pennsylvania State University

2020 - Present

- Investigating the utility of context-sensitive conversational agents to improve health and wellbeing
- Developed technology-driven interventions for a diverse range of health applications (e.g. PTSD, chronic pain)

Graduate & Undergraduate Research Assistant

Sensing Systems for Health Lab (led by Dr. Laura Barnes)

University of Virginia

2015 - 2020

- Led multiple research projects towards developing novel computational methods for inferring mental health from digital data streams
- Collaborated with experts in clinical and social psychology, environmental architecture, kinesiology, and other health-related domains.

NSF REU Intern

Interaction Lab (led by Dr. Maja Matarić)

University of Southern California

2017

- Conducted exploratory research on socially assistive robotics
- Wrote and documented ROS code for operating a remote telepresence robot

Teaching Experience

IST 501: Interdisciplinary Research Design for Information Science

Fall 2022

IST 557: Data Mining

Fall 2021

IST 140: Intro to Application Development

Fall 2021

SYS 4581/6581: Mobile Sensing and Health

Fall 2020 - 2021

Delivered guest lectures on mobile sensing and mental health.

SARC 5400: Data Visualization

Spring 2018 - 2020

Full-time TA for 3 semesters with 90 students each. Responsible for weekly workshops and grading.

APMA 3080: Linear Algebra

Fall 2017

Honors & Awards

CRA-WP Grad Cohort for Women	2021
AMIA WISH Mentorship Program	2020
Penn State University Graduate Fellowship	2020
Jordan Rednor Merit Scholarship	2020
Louis T. Rader Outstanding Graduate Student Award Recognized as top student among my cohort of 130 students.	2019, 2020
Unity Student Scholarship for GDC 2018 Scholarship to attend the Game Developers Conference (GDC) in San Francisco, CA	2018

Publications

KE Daniel, **S Mendu**, A Baglione, L Cai, BA Teachman, LE Barnes, M Boukhechba. (2022). Cognitive Bias Modification for Threat Interpretations: Using Passive Mobile Sensing to Detect Intervention Effects in Daily Life. *Anxiety, Stress, and Coping*.

HJ Han, **S Mendu**, BK Jaworski, JE Owen, S Abdullah. (2021). PTSDialogue: Designing a Conversational Agent to Support Individuals with Post-Traumatic Stress Disorder. In *UbiComp-ISWC '21 Adjunct: Adjunct Proceedings of the 2021 ACM International Joint Conference on Pervasive and Ubiquitous Computing*.

S Mendu, S Sundar, S Abdullah. (2021). Context-Specific Usability Measures for Voice Assistants. *CHI 2021 Let's Talk About CUIs: Putting Conversational User Interface Design Into Practice Workshop*.

C Neale, A Griffiths, LS Chalmin-Pui, **S Mendu**, M Boukhechba, J Roe. (2021). Color Aesthetics: A Transatlantic Comparison of Psychological and Physiological Impacts of Warm and Cool Colors in Garden Landscapes. *Wellbeing, Space & Society*.

S Mendu, A Baglione, S Bae, C Wu, B Ng, A Shaked, G Clore, M Boukhechba, L Barnes. (2020). A Framework for Understanding the Relationship between Social Media Discourse and Mental Health. *Proceedings of the ACM on Human-Computer Interaction*.

H Rashid, **S Mendu**, KE Daniel, ML Beltzer, BA Teachman, M Boukhechba, LE Barnes. (2020). Predicting Subjective Measures of Social Anxiety from Sparsely Collected Mobile Sensor Data. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*.

S Mendu, A Baglione, S Bae, LE Barnes. (2020). Redesigning the Quantified Self Ecosystem with Mental Health in Mind. *CHI 2020 Technology Ecosystems: Rethinking Resources for Mental Health Workshop*.

K Kowsari, KJ Meimandi, M Heidarysafa, **S Mendu**, LE Barnes, DE Brown. (2019). Text Classification Algorithms: A Survey. *Information*.

S Mendu, M Boukhechba, A Baglione, S Bae, C Wu, LE Barnes. (2019). SocialText: A Framework for Understanding the Relationship Between Digital Communication Patterns and Mental Health. In *ICSC '19: Proceedings of the 13th IEEE International Conference on Semantic Computing*.

NJ Napoli, MW Demas, **S Mendu**, CL Stephens, KD Kennedy, AR Harrivel, RE Bailey, LE Barnes. (2018). Uncertainty in Heart Rate Complexity Metrics caused by R-peak Perturbations. *Computers in Biology and Medicine*.

S Mendu, M Boukhechba, JR Gordon, D Datta, E Molina, G Arroyo, SK Proctor, KJ Wells, LE Barnes. (2018). Design of a Culturally-Informed Virtual Human for Educating Hispanic Women about Cervical Cancer. In *PervasiveHealth '18: Proceedings of the 12th EAI International Conference on Pervasive Computing Technologies for Healthcare*.

Posters & Presentations

S Mendu, SD Fosco, ST Lanza, S Abdullah. (2022). *“It’s just so easy!”: Expert Evaluation of a Voice Interface to Support Mindfulness Practice for Individuals with Chronic Pain.* *Penn State Addiction Symposium.*

S Mendu, A Baglione, S Bae, C Wu, B Ng, A Shaked, G Clore, MO Boukhechba, LE Barnes. (2020). *SocialText: A Framework for Understanding the Relationship Between Digital Communication Patterns and Mental Health.* *University of Virginia Engineering Research Symposium.*

S Mendu, A Baglione, S Bae, C Wu, B Ng, G Clore, MO Boukhechba, LE Barnes. (2019). *Applying a Generalized Framework for Linking Private Social Media Discourse to Mental Health.* *UVA Engineering Systems and Environment Distinguished Speakers Series.*

S Mendu, M Boukhechba, L Cai, M Gerber, LE Barnes. (2019). *ReADI: Reliable Analytics for Disease Indicators.* *UVA Engineering Systems & Environment Graduate Research Symposium.*

H Shen, **S Mendu**. (2017). *Proposal for Cooperative Traffic Surveillance System.* *NASA Internships, Fellowships & Scholarships Exit Presentation.*

S Mendu, LE Barnes, KJ Wells. (2017). *Design of a Culturally-Informed Virtual Human for Educating Hispanic Women about Cervical Cancer.* *ACM Capital Region Celebration of Women in Computing.*

Service & Leadership

Graduate Student Association in IST, Vice President	2022 - 2023
Reviewer	2020 - 2021
CSCW '20, CHI '21, IEEE Pervasive Computing, PloS ONE, IEEE Access, ICWSM '22, CHI '22, ACM HEALTH	
Wellbeing Health and Innovation Lab, Webmaster	2020 - 2022
Student Volunteer, CSCW	2020
Link Lab Student Committee, Student Representative	2019 - 2020
Association for Computing Machinery at UVA, Vice Chair	2017 - 2018
IEEE at UVA, President	2017 - 2018
UVA Machine Learning Club, Departments Chair	2017 - 2018
Student Game Developers at UVA, Internal Relations Chair	2017 - 2018