

# Sanjana Mendu

✉ sanjana.mendu@psu.edu | 🌐 www.sanjanamendu.com

## Education

---

### Pennsylvania State University

Ph.D. in Informatics | Advisor: Saeed Abdullah

State College, Pennsylvania

Aug 2020 -

### University of Virginia

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

Charlottesville, Virginia

Aug 2018 - May 2020

B.S. in Computer Science

Aug 2014 - May 2018

## Research Experience

---

### Graduate Research Assistant

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

Pennsylvania State University

Aug 2020 -

- Work on developing novel technological interventions to improve health and wellbeing at scale
- Develop interventions for a diverse range of mental health issues while leveraging the affordances of context-aware conversational agents

### Graduate & Undergraduate Research Assistant

Sensing Systems for Health Lab (led by *Dr. Laura Barnes & Dr. Mehdi Boukhechba*)

University of Virginia

Mar 2015 - May 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

Jun - Aug 2017

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

## Work Experience

---

### NASA Langley Research Center

Research Directorate Intern

Hampton, VA

Jun - Aug 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

## Awards

---

### CRA-WP Grad Cohort for Women

Apr 2021

### AMIA WISH Mentorship Program

Nov 2020

### Penn State University Graduate Fellowship

Aug 2020

### Jordan Rednor Merit Scholarship

Aug 2020

### Louis T. Rader Outstanding Graduate Student Award

May 2019 & 2020

Recognized as top student among my cohort of 130 students.

### Unity Student Scholarship for GDC 2018

Mar 2018

Scholarship to attend the Game Developers Conference (GDC) in San Francisco, CA

### Vidya Balvantrai Shelat Fund

Nov 2017

1 out of 10 students who received this internal fellowship to support graduate school applications

### HackNC: Best Use of Esri API

Oct 2016

### Caring for the Caregiver Hack: 2nd place

Mar 2016

# Publications

---

## Journal Articles

4. KE Daniel, **S Mendu**, A Baglione, L Cai, BA Teachman, LE Barnes, M Boukhechba. (Jul 2021). Cognitive Bias Modification fort Threat Interpretations: Using Passive Mobile Sensing to Detect Intervention Effects in Daily Life. *Anxiety, Stress, and Coping*
3. C Neale, A Griffiths, LS Chalmin-Pui, **S Mendu**, M Boukhechba, J Roe. (Jan 2021). Color Aesthetics: A transatlantic comparison of psychological and physiological impacts of warm and cool colors in garden landscapes. *Wellbeing, Space & Society*
2. K Kowsari, KJ Meimandi, M Heidarysafa, **S Mendu**, LE Barnes, DE Brown. (Apr 2019). Text Classification Algorithms: A Survey. *Information*
1. NJ Napoli, MW Demas, **S Mendu**, CL Stephens, KD Kennedy, AR Harrivel, RE Bailey, LE Barnes. (Dec 2018). Uncertainty in Heart Rate Complexity Metrics caused by R-peak Perturbations. *Computers in Biology and Medicine*

## Conference Papers

2. **S Mendu**, A Baglione, S Bae, C Wu, B Ng, A Shaked, G Clore, M Boukhechba, L Barnes. (Oct 2020). A Framework for Understanding the Relationship between Social Media Discourse and Mental Health. *Proceedings of the ACM on Human-Computer Interaction*.
1. H Rashid, **S Mendu**, KE Daniel, ML Beltzer, BA Teachman, M Boukhechba, LE Barnes. (Sep 2020). Predicting Subjective Measures of Social Anxiety from Sparsely Collected Mobile Sensor Data. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*.

## Workshop Papers

4. **S Mendu**, S Sundar, S Abdullah. (May 2021). Usability Evaluation of Voice Assistants. CHI 2021 Let's Talk About CUIs: Putting Conversational User Interface Design Into Practice Workshop. Yokohama, JP.
3. **S Mendu**, A Baglione, S Bae, LE Barnes. (Apr 2020). Redesigning the Quantified Self Ecosystem with Mental Health in Mind. CHI 2020 Technology Ecosystems: Rethinking Resources for Mental Health Workshop. Honolulu, HI, USA.
2. **S Mendu**, M Boukhechba, A Baglione, S Bae, C Wu, LE Barnes. (Jan 2019). SocialText: A Framework for Understanding the Relationship Between Digital Communication Patterns and Mental Health. In *Proceedings of the 13th IEEE International Conference on Semantic Computing (ICSC '19)*. Newport Beach, CA, USA, 428-433.
1. **S Mendu**, M Boukhechba, JR Gordon, D Datta, E Molina, G Arroyo, SK Proctor, KJ Wells, LE Barnes. (May 2018). Design of a Culturally-Informed Virtual Human for Educating Hispanic Women about Cervical Cancer. In *Proceedings of the 12th EAI International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth '18)*. ACM, New York, NY, USA, 360-366.

## Posters

2. **S Mendu**, A Baglione, S Bae, C Wu, B Ng, A Shaked, G Clore, MO Boukhechba, LE Barnes. (Apr 2020). SocialText: A Framework for Understanding the Relationship Between Digital Communication Patterns and Mental Health. *University of Virginia Engineering Research Symposium (UVERS)*.
1. **S Mendu**, M Boukhechba, L Cai, M Gerber, LE Barnes. (Feb 2019). ReADI: Reliable Analytics for Disease Indicators. *UVA Engineering Systems & Environment Graduate Research Symposium*.

## Presentations

2. H Shen, **S Mendu**. (Aug 2017). Proposal for Cooperative Traffic Surveillance System. NASA Internships, Fellowships & Scholarships (NIFS) Exit Presentation. Hampton, VA.
1. **S Mendu**, LE Barnes, KJ Wells. (Feb 2017). Design of a Culturally-Informed Virtual Human for Educating Hispanic Women about Cervical Cancer. *ACM Capital Region Celebration of Women in Computing (Research Shorts)*. Washington DC.

## Invited Talks

2. **S Mendu**. (Oct 2020). Mobile Sensing & Mental Health. SYS 4581/6581: Mobile Sensing and Health.
1. **S Mendu**, A Baglione, S Bae, C Wu, B Ng, G Clore, MO Boukhechba, LE Barnes. (Sep 2019). Applying a Generalized Framework for Linking Private Social Media Discourse to Mental Health. *UVA Engineering Systems and Environment Distinguished Speakers Series*.

## Teaching Experience

---

<b>SARC 5400: Data Visualization</b>	Spring 2018 - 2020
Full-time TA for 3 semesters with 90 students each. Responsible for weekly workshops and grading.	
<b>APMA 3080: Linear Algebra</b>	Fall 2017

## Extracurricular Activities

---

### Leadership

<b>Student Representative</b> , Link Lab Student Committee	2019 - 2020
<b>Association for Computing Machinery</b> , Vice Chair	2017 - 2018
<b>IEEE at UVA</b> , President	2017 - 2018
<b>Machine Learning Club</b> , Departments Chair	2017 - 2018
<b>Student Game Developers at UVA</b> , Internal Relations Chair	2017 - 2018

### Mentorship

<b>Charlottesville High School</b>	Oct - Dec 2019
Mentored high school students working on engineering capstone projects	
<b>USC SHINE</b>	Jun - Aug 2017
Mentored 2 high school students working on research projects in computer science	
<b>Women in Computer Science</b>	Sep 2016 - May 2017
<b>Peer Advising Family Network</b>	Sep 2015 - May 2016
Peer mentorship program for first year Asian-American students	

### Outreach

<b>College Mentors for Kids</b> , Volunteer	Mar 2017
Held workshop to introduce local 2nd - 4th graders to video game development	
<b>Girls Who Code</b> , Panelist	July 2017
<b>Society of Women Engineers</b> , High School Visitation Group Leader	Apr 2016
<b>Patronus Project</b> , Panelist	Feb 2015
Spoke to undergraduate students about mental health stigma	

### Service

<b>CSCW</b> , Student Volunteer	Oct 2020
<b>Charlottesville Albemarle SPCA</b> , Volunteer	Mar - Aug 2019
<b>Extra Life</b> , Site Coordinator	Nov 2017
Hosted a 24-hour video game streaming event and raised \$600 for the UVA Children's Hospital	
<b>Virginia Institute of Autism (VIA)</b> , Volunteer	Mar - Apr 2017
Introduced children at the VIA to robotics and engineering through the Lego Mindstorm curriculum	

### Peer Review

PLoS ONE  
IEEE Access