Sachin R. Pendse

Georgia Institute of Technology
CODA Tech Square
756 W Peachtree Street NW
Atlanta, GA 30308

Email: sachin.r.pendse@gatech.edu
Homepage: sachinpendse.in

Research Interests and Skills

I am a PhD student in Human-Centered Computing, broadly interested in how identity-based factors (such as race, class, caste, gender identity, or sexual orientation) influence how people experience, express, and seek care for their mental health. My research aims to understand how technology can support people's identity-based and individual care needs, with this work done towards designing more accessible technology-mediated points of care. My current areas of focus are the role of technology-mediated support in U.S. Mental Health Professional Shortage Areas, the use of mental health helplines by minority users in India, and user experiences with algorithmically personalized resources for care.

Education

Doctor of Philosophy, Human-Centered Computing   *2019 - Present*
Georgia Institute of Technology
Advisors: Professor Munmun De Choudhury, Professor Neha Kumar
Overall GPA: 4.00/4.00

Master of Science, Computer Science   *August 2017 - May 2018*
Brown University
Advisor: Jeff Huang
Overall GPA: 4.00/4.00

Bachelor of Arts, Computer Science   *August 2013 - May 2017*
Bachelor of Arts, International Relations
Brown University
Overall GPA: 3.71/4.00

Publications

Refereed Conference and Journal Articles
Publication venues in blue.

1. **Pendse, Sachin R.**, Daniel Nkemelu, Nicola J. Bidwell, Sushrut Jadhav, Soumitra Pathare, Munmun De Choudhury, and Neha Kumar. From Treatment to Healing: Envisioning a Decolonial Digital Mental Health. In **Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems**. ACM, 2022.

2. **Pendse, Sachin R.**, Amit Sharma, Aditya Vashistha, Munmun De Choudhury, and Neha Kumar. "Can I Not Be Suicidal On a Sunday?": Understanding Technology-Mediated Pathways to Mental Health Support. In **Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems**. ACM, 2021. **Best Paper.**

3. Massachi, Talie*, Grant Fong*, Varun Mathur*, **Sachin R Pendse***, Hoefer Gabriela, Jessica J Fu, Chong Wang, Nicole R Nugent, Megan L Ranney, Daniel P Dickstein, Michael F Armey, Jeff Huang. Sochiatrist: Signals of Affect in Messaging Data. **Proceedings of the ACM on Human-Computer Interaction, CSCW (PACM HCI) 2020**. *Equal contribution.

4. **Pendse, Sachin R.**, Faisal M. Lalani, Munmun De Choudhury, Amit Sharma, and Neha Kumar. Like Shock Absorbers: Understanding the Human Infrastructures of Technology-Mediated Mental Health Support. In **Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems**. ACM, 2020.

5. **Pendse, Sachin R.**, Kate Niederhoffer, Amit Sharma. (2019). Cross-Cultural Differences in the Use of Online Mental Health Support Forums. In Proc. CSCW 2019: **ACM Conference on Computer Supported Cooperative Work and Social Computing, 2019**.

6. Naslund, John A., Pattie P. Gonsalves, Oliver Gruebner, **Sachin R. Pendse**, Stephanie L. Smith, Amit Sharma, and Giuseppe Raviola. (2019). "Digital Innovations for Global Mental Health: Opportunities for Data Science, Task Sharing, and Early Intervention." **Current Treatment Options in Psychiatry**: 1-15.

7. **Pendse, Sachin R.**, Naveena Karusala, Divya Siddarth, Pattie Gonsalves, Seema Mehrotra, John A. Naslund, Mamta Sood, Neha Kumar, and Amit Sharma. (2019). Mental Health in the Global South: Challenges and Opportunities in HCI for Development. In Proc. COMPASS 2019: **ACM SIGCAS Conference on Computing and Sustainable Societies, 2019**.

8. Nugent, Nicole R., **Sachin R. Pendse**, Heather T. Schatten, and Michael F. Armey. (2019). "Innovations in Technology and Mechanisms of Change in Behavioral Interventions." **Behavior modification** (2019): 0145445519845603.

9. Pruksachatkun, Yada*, **Sachin R. Pendse***, and Amit Sharma. (2019). Moments of Change: Analyzing Peer-Based Cognitive Support in Online Mental Health Forums. In **Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems**, p. 64. ACM, 2019. *Equal contribution.

Refereed Workshop Articles and Presentations

1. Karusala, Naveena, Azra Ismail, Karthik S Bhat, Aakash Gautam, **Sachin R. Pendse**, Neha Kumar, Richard Anderson, Madeline Balaam, Shaowen Bardzell, Nicola J Bidwell, Melissa Densmore, Elizabeth Kaziunas, Anne Marie Piper, Noopur Raval, Pushpendra Singh, Austin Toombs, Nervo Verdezoto, Ding Wang. (2021) The Future of Care Work: Towards a Radical Politics of Care in CSCW Research and Practice. Companion Publication of the **2021 Conference on Computer Supported Cooperative Work and Social Computing (CSCW)**.

2. Liang, Calvin, Emily Tseng, **Sachin R. Pendse**, Crystal Lee, Kimberley Allison, Neilly H. Tan, Ruotong Wang, Alexandra To, Amy Zhang. (2021). Subtle CSCW Traits: Tensions Around Identity Formation and Online Activism in the Asian Diaspora. Companion Publication of the **2021 Conference on Computer Supported Cooperative Work and Social Computing (CSCW)**.

3. Siddarth, Divya*, **Sachin R. Pendse***, Amit Sharma, Joyojeet Pal. (2019). Giving in the Short Term: Putting Research in Action Alongside Marginalized Groups. Presented at **Sensitive HCI Workshop at CHI 2019**. *Equal contribution.

4. **Pendse, Sachin R.**, Mamta Sood, Seema Mehrotra, Amit Sharma. Designing Culturally Aware and Resource Appropriate Digital Mental Health Interventions. In **Tenth International Conference on Information and Communication Technologies and Development** (ICTD '19), Ahmedabad, India, 2019.

Other Non-Peer Reviewed Publications

1. Rosenfeld, Adam, **Sachin R. Pendse**, and Nicole R. Nugent. (2017). How mobile health applications can help treat depression. **The Brown University Child and Adolescent Behavior Letter** 33, no. 9 (2017): 1-6.

2. **Pendse, Sachin R.**, and Nicole R. Nugent. (2017). Mental health challenges and opportunities in rural communities. **The Brown University Child and Adolescent Behavior Letter 33**, no. 6 (2017): 1-7.

Work Experience

Programming languages and frameworks are in **teal**. *UX research methods are in* **brown-orange**.

NLP Research Intern, Impossible Foods   *Summer 2021*
In this role, I used computational techniques to analyze qualitative sensory data and automatically gather insights from free-text comments. Through leveraging traditional methods pulled from sensory science research and literature, I created a human-in-the-loop NLP system that enabled sensory scientists to more quickly find and analyze subtle differences between samples.
Methods and Tools: **Python**, **Streamlit**, **SQL**, **Topic Modeling**, **Language Modeling**, **System Design**, **User Interface Design**, **Iterative Design**, **Stakeholder Interviews**

Research Intern, Microsoft Research India   *Summer 2020*
I designed and led an interview study to understand the different ways that the unique and identity-based needs of callers to Indian mental health helplines are not met. Through using a design justice based approach, I analyzed how the needs of callers are marginalized by interactions between the technical design of the helpline and societal/structural factors. This work was accepted for publication at ACM SIGCHI 2021.
Methods and Tools: **Study Design** (including ideation, IRB approval, implementation, publication drafting, and submission), **Open Coding**, **Thematic Analysis**, **User Recruitment**, **User Targeting** (via Facebook Ads and Google Ads), **Semi-Structured Interviewing**, **Iterative Prototyping and Design**

Research Fellow, Microsoft Research India   *July 2018 - August 2019*
As a Research Fellow in Microsoft Research in Bangalore, within the Technology in Emerging Markets group, I worked on understanding how people come to understand their mental health and look for help based on this understanding. Advised by Amit Sharma, I investigated research questions around this broader question using quantitative (both descriptive and predictive) and qualitative methods. This resulted in 6 different publications, five of which were in ACM-affiliated venues (CHI, COMPASS, and CSCW). I also continued to lead a continuing project with the group as part of my PhD research work, or understanding how people use mental health helplines in India and designing and building a national mental health helpline.
Methods and Tools: **Social Media Analysis**, **Amazon Mechanical Turk**,**Study Design**, **Sentiment Analysis**, **Regression and Predictive Modeling**, **Survey Design and Analysis**, **Significance Testing**, **Information Architecture/User Flow**, **Semi-Structured Interviewing**, **Open Coding**, **Thematic Analysis**, **Python**, **SQL**, **Flask**, **HTML/CSS/JavaScript**, **Node.js**

Software Engineering Intern, Microsoft Garage   *Summer 2017*
Wrote Android and iOS applications in C# with the use of MVVM architecture patterns and Xamarin Studio. Worked as part of an interdisciplinary team to build a cross-platform and enterprise-standard application.
Methods and Tools: **C#**, **Cross-Platform Mobile Applications** (Android and iOS) via **Xamarin Studio**, **HTML/CSS/JavaScript**

Engineering and Analytics Intern, Cisco Systems   *Summer 2014 - Summer 2016*
Used HTML/CSS/JavaScript/D3 frontend, Python/NodeJS backend, and CouchDB database to create an analytics dashboard for sales engineers to interface with the data and use it as a guide to where to devote more effort to pitch services. Used Python to clean and explore Cisco's install base data and begin work on a model to predict the likelihood of a customer to renew service support on their Cisco equipment.

Methods and Tools: **Python**, **NodeJS**, **CouchDB**, **HTML/CSS/JavaScript/D3**

Undergraduate Teaching Assistant, Brown University *Fall 2014 - Spring 2016*
Classes: Cybersecurity and International Relations (Spring 2017, 2016, 2015), User Interface Design (Fall 2015), Belonging and Displacement: Cross-Cultural Identities (Fall 2014)

Fellowships

Research Fellow at Microsoft Research India *July 2018 - August 2019*
Funded by Microsoft to do research to understand how people in India conceptualize and express their mental health given cultural and socioeconomic factors using qualitative and quantitative methods. Conceptualized, designed and worked on the implementation of a national mental health helpline for India.

India Initiative Undergraduate Research Fellow *2016 - 2017*
Funded by Brown University to conduct an independent research project on social media for political activism among the Tibetan exile community of Dharamsala, India, including a literature review, ethnographic interviews and fieldwork, and social media analysis.

Research Experience

Graduate Research Assistant, Georgia Tech Social Dynamics and Well-Being Lab *August 2019 - present*
Research Assistant, Brown Human-Computer Interaction Lab *Fall 2016 Spring 2018*
Research Assistant, Brown Center for Biomedical Informatics *Fall 2016 - Spring 2018*
Research Assistant, Brown University Department of Anthropology *Fall 2016 - Spring 2018*

Invited Talks

Designing for Healing, *Google UX Research APAC* *June 2021*

Service and Leadership Roles

Mental Health Advocacy
Executive Team Lead, Peer Support, CAREspaces *Summer 2020 - present*
Health and Wellness Advocate, Brown Department of Computer Science *Spring 2017 - Spring 2018*
Peer Mental Health Advocate, Project LETS *Fall 2016 - Spring 2018*

Reviewing
Proceedings of the ACM on Human-Computer Interaction, CSCW (PACM HCI) *2020 - present*
ACM CHI Conference on Human Factors in Computing Systems (CHI) *2020 - present*
Recognized for Outstanding Review, CHI 2021