

Sachin R. Pendse: Curriculum Vitae

Georgia Institute of Technology
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Research Interests and Skills

My research examines the role that identity, culture, and marginalization play when people in distress interact with online mental health support. I utilize large-scale computational analyses and in-depth qualitative approaches across global contexts to shed light on how socioeconomic exclusion, identity-based biases, and technology design can together shape experiences of distress. My work answers questions around how we can design mental health technologies and interventions that are sensitive to a person's cultural expectations around support, and attentive to the social factors that limit access to care. I take an interdisciplinary approach to my work, and have published at top-tier venues for human-computer interaction, receiving Best Paper (top 1% of submissions) and Best Paper Honorable Mention (top 5% of submissions) awards at CHI. I also have experience initiating and co-writing grants, with \$138,500 of cumulative funds generated from grant applications for which I was the lead student author.

Education

Doctor of Philosophy, Human-Centered Computing

2019 - 2024 (expected)

Georgia Institute of Technology

Advisors: Munmun De Choudhury and Neha Kumar

Committee: Michael Best, Andrea Grimes Parker, Jessica Schleider, Amit Sharma

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

*Publication venues*¹ in *blue*. *Awards* in *purple*.

Refereed Conference and Journal Articles

1. **Pendse, Sachin R.**, Neha Kumar, and Munmun De Choudhury. Marginalization and the Construction of Mental Illness Narratives Online: Foregrounding Institutions in Technology-Mediated Care. **Proceedings of the ACM on Human-Computer Interaction, CSCW (PACM HCI) 2023**. ACM, 2023.
2. Rochford, Benjamin*, **Sachin R. Pendse***, Neha Kumar, and Munmun De Choudhury. Leveraging Symptom Search Data to Understand Disparities in U.S. Mental Health Care: Demographic Analysis of Search Engine Trace Data. **JMIR Mental Health**. 2023. *Equal contribution.

¹Note: top-tier computer science conferences like CHI and CSCW employ a rigorous peer-review process, typically involving 3-4 specialized reviewers, and are meant exclusively for archival-quality papers. For further information, you can refer to <http://portal.acm.org/citation.cfm?id=1743546.1743569>.

3. **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. **Best Paper Honorable Mention**.
4. **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**.
5. Massachi, Talie*, Grant Fong*, Varun Mathur*, **Sachin R Pendse***, Gabriela Hofer, Jessica J Fu, Chong Wang, Nicole R Nugent, Megan L Ranney, Daniel P Dickstein, Michael F Arme y, Jeff Huang. Sochiatrist: Signals of Affect in Messaging Data. [Proceedings of the ACM on Human-Computer Interaction, CSCW \(PACM HCI\) 2020](#). ACM, 2020. *Equal contribution.
6. **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.
7. **Pendse, Sachin R.**, Kate Niederhoffer, Amit Sharma. Cross-Cultural Differences in the Use of Online Mental Health Support Forums. [Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing, CSCW 2019](#). ACM, 2019.
8. Naslund, John A., Pattie P. Gonsalves, Oliver Gruebner, **Sachin R. Pendse**, Stephanie L. Smith, Amit Sharma, and Giuseppe Raviola. "Digital Innovations for Global Mental Health: Opportunities for Data Science, Task Sharing, and Early Intervention." [Current Treatment Options in Psychiatry](#): 1-15. 2019.
9. **Pendse, Sachin R.**, Naveena Karusala, Divya Siddarth, Pattie Gonsalves, Seema Mehrotra, John A. Naslund, Mamta Sood, Neha Kumar, and Amit Sharma. Mental Health in the Global South: Challenges and Opportunities in HCI for Development. [Proceedings of the ACM SIGCAS Conference on Computing and Sustainable Societies, COMPASS 2019](#). ACM, 2019.
10. Nugent, Nicole R., **Sachin R. Pendse**, Heather T. Schatten, and Michael F. Arme y. "Innovations in Technology and Mechanisms of Change in Behavioral Interventions." [Behavior modification](#) (2019): 0145445519845603.
11. Pruksachatkun, Yada*, **Sachin R. Pendse***, and Amit Sharma. Moments of Change: Analyzing Peer-Based Cognitive Support in Online Mental Health Forums. [Proceedings of the CHI Conference on Human Factors in Computing Systems, CHI 2019](#), p. 64. ACM, 2019. *Equal contribution.

Refereed Workshop Articles and Presentations

1. Patel, Dilisha*, **Sachin Pendse***, Munmun De Choudhury, Sarah Dsane, Kaylee Payne Kruzan, Neha Kumar, Aneesha Singh, and Mark Warner. "Information-Seeking, Finding Identity: Exploring the Role of Online Health Information in Illness Experience." In Companion Publication of the [2022 Conference on Computer Supported Cooperative Work and Social Computing](#), pp. 263-266. 2022. *Equal contribution.
2. 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 Kazianus, 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 \(CSCW\)](#).

3. Liang, Calvin, Emily Tseng, **Sachin R. Pendse**, Crystal Lee, Kimberley Allison, Neilly H. Tan, Ruo-tong 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 \(CSCW\)](#).
4. 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.
5. **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. 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. Mental health challenges and opportunities in rural communities. [The Brown University Child and Adolescent Behavior Letter](#) 33, no. 6 (2017): 1-7.

Grants, Awards, and Funding

Total funds generated as lead student author: \$138,500 (2016-2023)

GVU Center at Georgia Tech

2022, 2023

Selected as a finalist for the Foley Scholars Program, in both 2022 and 2023.

Microsoft Research Accelerate Foundation Models Academic Research Initiative

2023

Funded to study how individuals are utilizing Large Language Model (LLM) chatbots for mental health support. Lead PhD student on this project, supporting grant writing and research implementation.

Total Funded Amount: \$10,000

Institute for People and Technology (IPaT) Research Fellowship, Georgia Tech

2022

Funded to study how individuals in Mental Health Professional Shortage Areas (MHPSAs) come to understand mental health experiences, and the role of technology-mediated tools in that process.

Total Funded Amount: \$25,000

Microsoft AI for Accessibility (AI4A)

2020 - 2021

Funded to study the Indian mental health helpline system, with a specific focus towards understanding how technology might be used to more effectively and quickly match volunteers with callers in need. Lead PhD student for this project, supporting community partnerships and grant writing.

Total funded amount: \$100,000

Center for Contemporary South Asia Fellowship, Brown University

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. When awarded, this was called the India Initiative Undergraduate Research Fellowship.

Total funded amount: \$3,500

Teaching

Graduate Teaching Assistant, Georgia Tech

Fall 2021 - Spring 2024

Classes: Human-Centered Computing Seminar (Fall 2021) Technology and Equity (Fall 2022), Social Computing (Spring 2024)

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)

Work Experience

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

Research Intern, Microsoft Research

Summer 2022

As an intern for the Human Understanding and Empathy (HUE) Team, mentored by Dr. Mary Czerwinski, Dr. Jenna Butler, and Jina Suh, I studied cross cultural differences in how individuals came to express experiences with distress and wellbeing during the mass move to remote work in 2020. This mixed-methods work bears direct implications for creating remote workplaces that are less taxing and stressful for workers.

Methods and Tools: Sentiment Analysis, Regression and Predictive Modeling, Survey Design and Analysis, Significance Testing, Study Design (including ideation, IRB approval, implementation, publication drafting, and submission), Open Coding, Thematic Analysis

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, understanding how people use mental health helplines in India, and improving mental health helpline design.

Methods and Tools: Social Media Analysis, Amazon Mechanical Turk, Study Design, Sentiment Analysis, Regression and Predictive Modeling, Survey Design and Analysis, Significance Testing, Informa-

tion 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

Public Communication, Social Impact and Leadership

Invited Talks

From Treatment to Healing, *Google Trust & Safety Seminar*

May 2023

Centering the Role of Identity in Technology-Mediated Support, *Cornell InfoSci Seminar*

March 2023

Centering Identity in Digital Mental Health, *Stony Brook University*

February 2023

Envisioning a Decolonial Digital Mental Health, *Center for Applied Data Ethics, USF*

June 2022

Towards Mental Health Equity, *INFO Science Seminar Series at CU Boulder*

March 2022

Designing for Healing, *Google UX Research APAC*

June 2021

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

References

Dr. Munmun De Choudhury (Co-Advisor)

Website: <http://www.munmund.net/>

Email: munmun.choudhury@cc.gatech.edu

Dr. Neha Kumar (Co-Advisor)

Website: <https://nehakumar.org/>

Email: neha.kumar@gatech.edu

Dr. Amit Sharma (Collaborator and Former Supervisor)

Website: <http://amitsharma.in/>

Email: amshar@microsoft.com

Dr. Mary Czerwinski (Collaborator and Former Supervisor)

Website: <https://www.microsoft.com/en-us/research/people/marycz/>
Email: marycz@microsoft.com

Dr. Jessica Schleider (Committee Member)

Website: <https://www.schleiderlab.org/labdirector.html>
Email: jessica.schleider@northwestern.edu