

Diversity in research is critical because scientific enquiry is most productive when the practitioners are drawn from a variety of cultures and experiences. It **expands the frontier of human knowledge** we are exploring as a community - people from varying backgrounds are motivated to study different problems. Additionally, it ensures that the **fruits of effort are accessible to and benefit a greater portion of humanity**. Systemic issues related to inclusivity and equity in institutions of science restrict the impact science can have in our world. However, I am confident that the status quo will improve as stakeholders first analyze their perspectives, and then learn, and finally, make volitional changes in their decisions and actions. My perspective has been shaped through my intersectional experiences in India and in the US where I have both **suffered as well as benefited from systemic inequalities**. Over the years, I have grown from feeling marginalized in a field that has limited participation from women to feeling **empowered towards increasing participation** by individuals with diverse experiences through meaningful, deliberate action.

A female child in India is usually considered an emotional and financial burden. I am immensely grateful that despite the common apathy, my family expected me to do well academically and invested their time and resources in my education. Over time, I developed a passion for studying science and academic success became a part of my identity. In resisting a patriarchal culture, I also developed an identity of a progressive and emancipated woman who regularly challenged gendered norms. Attending an engineering college and pursuing a computer science (CS) graduate degree has only strengthened that rebellious identity. However, in the last few years, I have become more cognizant of privileges in my life. My family belongs to the dominant castes in India which guarantees access to significant social and financial capital. My belonging to the top educational institutions has never been challenged. I, now, am painfully aware that several of my classmates were considered 'undeserving' of quality education because they had availed India's affirmative action policies. Along similar lines, in the United States, Indians are considered the 'ideal immigrants' - people who are dedicated, hard-working, and smart. Indians not only form a significant part of the workforce in technology industry, we also occupy positions of power. My place in the world as a computer scientist has been greatly aided by these perceptions. Other minority races do not have this privilege. I have now begun to look beyond my personal sense of rebellion and adopt a holistic approach that encompasses the diversity in human experiences. I am committed to improving diversity in science and technology spaces through direct action along three goals: **increasing diversity of problems in AI research, creating inclusive science organizations, and expanding access to scientific training**.

Increasing the diversity of problems in AI research: Historically, the problem domains of AI have been selected by a small, insular community which has led to a deep cultural bias in what is considered cutting-edge AI research, how research investments are made, what gets published, and where resources are devoted. This bias has led to the consequence that AI algorithms dominate Jeopardy and Go but we do not have methods to model and curb the spread of infectious disease in our communities (arguably the more critical human need). In my research, I specifically **target problems have a potential to improve public welfare** (health behavior coaching for the overweight population, reducing energy expenditure in cities). A challenge that I commonly face in pursuing such a research agenda is that these problems are not considered *AI problems/domains* but *health or energy*. This perception itself is reflective of the bias in AI communities. There is no real reason why 'AI for games' is considered *AI* and not just *computer games*. AI is a *design* science and not a *descriptive* one - we are discovering the nature of intelligent computations and exploiting it to create novel systems. From this perspective, a diverse types of problem can be framed as AI problems. What gets chosen as a challenge AI problem and dominates our scientific narrative is driven by the cultural bias of people practicing AI. As a scientist, I champion research along the *AI for social good* agenda and **study problems from underserved areas, domains, and communities** in the US and worldwide. Through my research and advocacy, I expect to demonstrate that truly challenging AI problems exist outside of the domains that are traditionally studied under the AI umbrella and will lead to fundamental advances.

Creating inclusive science organizations: In the past few years, I have made a conscious effort to recognize the growing sphere of my influence and use it to improve diversity in my communities. I have focused my efforts on **systemic changes which tend to be slow** but have the **potential to create a long lasting impact**. As the co-chair and chair of AAAI Doctoral Consortia (DC) 2020 and 2021, I adopted diversity as one of the aims and we achieved gender parity for the first time in the history of AAAI DC in 2020. This was an outcome

of active outreach to a diverse graduate student population and not of an explicit affirmative action policy for selection - women contributed several extremely competitive applications. However, I also realized that **my own definition of diversity was biased** due my experience as a woman in AI. The DC cohort of 2020 was still dominated by North American, European, and Indian origin student. As a corrective action, in 2021, we adopted cultural diversity as a goal. Through an extensive search, I identified a female, Brazilian colleague to serve as a co-chair with an expectation that a dedicated outreach to South American countries will improve participation from that part of the world. Although, this outcome wasn't met in 2021, we hope to be successful in the future with dedicated effort.

I invested in similar efforts as a co-chair for Advances in Cognitive Systems (ACS 2020). We ensured diverse representations in our invited talks by broadening our search for scientists who were not core cognitive systems experts but had overlapping interests. Through the use of Slack and Zoom as well as social media, we were able to double the conference attendance, attracting people from more than 10 countries with a significant improvement in student participation. This experience has illuminated the need of **making a concentrated effort in reaching beyond geographical borders** - to people who may not have a background in academic research but are hungry for learning more. As we move back to holding in-person conferences, we are considering additional sessions that feature content designed to be more accessible and are conducted online using Slack and Zoom.

Expanding access to scientific training: A reality of the current state of science is that the knowledge of how to pursue it **remains concentrated in few institutions** around the world. Young, aspiring scientists in countries like India leave their family, friends, and cultural connections to live in a different country. It is a **difficult choice** to make. Often, the students have not had any undergraduate research experience, leaving them unprepared for life at a top graduate school. I was fortunate that University of Michigan and my graduate advisor accepted me despite of my lack of experience in research and nurtured the scientist in me. They introduced me to a fascinating world of AI research and gave me access to a very exclusive network. I am committed to supporting students - particularly from the Global South - in accessing scientific and technology spaces. I started mentoring undergraduate students in India as a senior graduate student at Michigan and advised two undergraduate theses at tier-two Indian universities. It's gratifying that the two lead students on these efforts are now training to be computer scientist at premier universities. Along this effort, I will forge formal collaborations with international institutions and study problems from the developing world context. This will not only **create an opportunity for students to experience research** and create pathways for them, it will also expand the kinds of problems we study in AI.

Building upon my experiences, as a professional scientist, I am committed towards an impact that is aligned with my intersectional identity. As a woman in science, I will continue to advance solutions for problems I am passionate about and work towards become a leading scientist. As a person of Indian origin, I will continue to learn about challenges that members of non-dominant castes, races, and cultures face and continue serving as an ally in advancing their participation in science. As a person who has experienced graduate school, I will be an empathetic and compassionate guide in navigating the multitude of challenges it presents at a critical time period in life. As an immigrant scientist, I will create a nurturing environment for young scientists who are braving foreign cultures to pursue their passion. Finally, as an adviser and mentor, I will support junior researchers in thinking critically and questioning their own perspectives and viewpoints, not only in their academic pursuits but in other spheres of their lives.