# DIVERSITY STATEMENT

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I grew up in a multi-ethnic community in Sri Lanka with different religions, cultures, and languages. When the 2004 Indian Ocean tsunami hit and devastated much of the island nation, many of the undergraduate students at my university, including myself, from various backgrounds, ethnic groups, and skill levels, grouped to develop what would be known as the very first disaster management software, called "Sahana" (Sinhala word for "relief").[1] The rapid collaborative development of the software to address a pretty miserable situation was an incredibly fulfilling experience that gave us, a diverse group of individuals, a sense of purpose at a highly troubling time. It truly demonstrated to me the full potential of diverse teams. Although I have not witnessed anything as devastating as the Indian Ocean tsunami since then, in my nearly 20 years of education, industry, and research career, I have directly observed many ways in which diverse individuals make teams stronger.

I have been very fortunate to work alongside talented, creative, insightful, kind, and understanding colleagues, students, and faculty. I have been inspired by the tenacity and honesty of my team members, who maintain deep commitments to diversity and inclusivity. Because I am/was a female person-of-color student/engineer/researcher, I am/was typically in the minority in the computer science oriented teams. Therefore, I have a deep and lasting impression on my own commitment to diversity as I believe in the mantra "do unto others as you would have them do unto you." I embrace our unique strengths: race, ethnicity, sexual orientation, gender, socio-economic status, age, ability, religious or political beliefs, or other ideologies. As I rose to more senior roles in both industry and academia, I have been striving to put myself in the shoes of those around me to ensure their voices are heard and concerns addressed. I have told my team members, colleagues, and students, "If you see something that does not feel right, I am here to listen to you." By doing that, I make sure that they can come to me when they need someone to listen to their concerns. I strive to address those around me using their preferred pronouns (he/she/they/we) inside the classroom, office, and in meetings. I am mindful of any comments that may come up in discussions deemed insensitive and take any corrective action if such incidents occur.

While at MIT as a graduate student, I taught introductory computer science topics in the MIT Women's Technology Program (WTP)[2] and participated in the MIT Women's Initiative[3]. Both the programs were designed to address gender disparities that emerge during the undergraduate level. For WTP, I designed and delivered an intensive summer program at MIT to a group of female high school students from all over the country. I experienced the various diverse student backgrounds and the need to be highly adaptive to cater to unique student needs. As part of the MIT Women's Initiative, I traveled to several high schools in Florida and delivered fun Science Technology Engineering and Math (STEM) education-related activities to make STEM attractive to students who had not considered a future in STEM. Both the experiences were highly gratifying. I later learned that many of the students from my WTP cohort majored in computer science in college, and some of them even went on to do PhDs in computer science, many of whom I still keep in touch with. The extremely positive experience from these programs prompted me to compile a book chapter titled "Making computer science attractive to high school girls with computational thinking approaches: A case study" [1], in which I highlighted how gender diversity is an essential component in computer science education and training.

I was also a co-president of the GW6 - Graduate Women in Course 6 (Electrical Engineering and Computer Science)[4] in 2010. During my tenure as the GW6 president, I organized many outreach activities for the graduate women in the department, including a career panel and several social activities (hiking, kayaking, painting, sushi rolling) that enabled women students to bond with each other outside of their research labs and engage in highly useful career development activities. I also co-organized several extra-curricular activities as a member of the MIT Computer Science and Artificial Intelligence Lab (CSAIL), such as board game nights and events for the CSAIL Olympics.[5] These events helped me and my fellow graduate students embrace our diverse backgrounds and interests in a very enjoyable manner. I also had the very rare opportunity to be an instructor for the MIT Accelerating Information Technology Innovation (now known as MIT Global Startup Labs)[6], in Kenya and the Philippines in 2011 and 2012, respectively. This experience exposed me to diverse cultures in Africa and Asia, and taught me how to develop and deliver a computer science course to a diverse, global audience.

[1] https://sahanafoundation.org/about-us/history
[2] http://wtp.mit.edu/eecs/index.html
[3] https://web.mit.edu/wi
[4] https://gw6.scripts.mit.edu/index.html
[5] http://projects.csail.mit.edu/olympics
[6] https://gsl.mit.edu/mit-global-startup-labs

Over the past several years, I have organized various events, including conferences, symposia, workshops, panels, and journal special issues. I am amazed at how successful these events are when there is a balanced, diverse representation among the speakers and editorial board members. I have discovered that diverse individuals bring complementary skills, and as such, they are well-known in the research community as pillars of excellence. As I have been getting more involved with several research communities at leadership and organizational roles, I have been particularly interested in increasing the participation of diverse student groups. To that end, I secured $20,000 of funding from the NSF to support US-based PhD student authors, predominantly minority and underrepresented student authors, to attend the International Semantic Web Conference (ISWC) 2019, held in Auckland, New Zealand. Without this grant, many US-based student authors would not have been able to travel to attend the conference. I also organized a mentorship lunch for those PhD students at the conference to discuss various issues, including career prospects and diversity, where senior researchers from the community imparted their wisdom in a casual setting. Continuing my commitment to student diversity and professional advancement, I accepted an invitation to be one of the two PhD symposium chairs for ISWC 2022. For the symposium, my co-chair and I are planning a panel discussion on career development advice for minority student groups. Furthermore, I organized a trip to Washington DC for five graduate women at RPI to participate in a women-led biodata hackathon organized by the National Library of Medicine in 2019. The event enabled the students to network with other like-minded female researchers, and all of the student participants mentioned that it was a very positive experience personally and professionally.

Finally, I am interested in and committed to incorporating equity and diversity in my future research agenda. I have contributed to an AI Magazine special issue that argues for diversity as one of the ingredients for successful AI research [2]. In particular, an interview with a senior Indian government official that I co-conducted highlighted the need for focusing on inclusivity for AI solutions designed to solve societal problems, especially in a developing country such as India [3]. Additionally, I co-chaired the AAAI Fall Symposia on AI for Social Good[7] in 2019 and 2020. Several of the discussions in the symposia focused on how AI ethics, model interpretability can be improved with the participation of diverse teams, and the need to address various societal issues stemming from the lack of diversity in AI. Furthermore, at RPI, I have contributed to research efforts on knowledge extraction of cohort characteristics in research publications [4], making study populations visible through knowledge graphs [5], and a study cohort ontology [6]. All of these research efforts have the primary aim of understanding how equitable past scientific studies have been, and they have given some insights as to where there can be some deficiencies in recruiting study participants for more well-rounded research studies. I was also previously drawn to research on democratizing mobile application development [7], which I believe is an effective way to make technology more approachable to diverse populations.

My past efforts demonstrate how I have endeavored to achieve diversity around me. My current efforts continue to reflect my commitment to enhancing diversity, equity, and inclusion. Looking ahead to my new role as a faculty member, I intend to use my training, skills, and position to ensure excellence and increase diversity at the university and beyond, and be an exemplar to the future generation of computer scientists.

# References


[1] **Oshani Seneviratne**. Making computer science attractive to high school girls with computational thinking approaches: A case study. In *Emerging research, practice, and policy on computational thinking*, pages 21–32. Springer, 2017.

[2] Ching-Hua Chen, James A. Hendler, Sabbir M. Rashid, **Oshani Seneviratne**, Daby Sow, and Biplav Srivastava. Reflections on successful research in artificial intelligence: An introduction. *AI Mag.*, 40(4):3–5, 2019.

[3] Arvind Gupta, Biplav Srivastava, Daby Sow, Ching-Hua Chen, and **Oshani Seneviratne**. Reflections on the ingredients for success in AI research: An interview with arvind gupta. *AI Mag.*, 40(4):24–27, 2019.

[4] Jay D. S. Franklin, Shruthi Chari, Morgan Foreman, **Oshani Seneviratne**, Daniel M. Gruen, Jamie P. McCusker, Amar K. Das, and Deborah L. McGuinness. Knowledge extraction of cohort characteristics in research publications. In *AMIA*. AMIA, 2020.

[5] Shruthi Chari, Miao Qi, Nkechinyere N. Agu, **Oshani Seneviratne**, Jamie P. McCusker, Kristin P. Bennett, Amar K. Das, and Deborah L. McGuinness. Making study populations visible through knowledge graphs. In *ISWC (2)*, volume 11779 of *Lecture Notes in Computer Science*, pages 53–68. Springer, 2019.

[6] Shruthi Chari, Miao Qi, Nkechinyere N. Agu, **Oshani Seneviratne**, Jamie P. McCusker, Kristin P. Bennett, Amar K. Das, and Deborah L. McGuinness. Ontology-enabled analysis of study populations. In *ISWC (Satellites)*, volume 2456 of *CEUR Workshop Proceedings*, pages 117–120. CEUR-WS.org, 2019.

[7] Fuming Shih, **Oshani Seneviratne**, Ilaria Liccardi, Evan W. Patton, Patrick Meier, and Carlos Castillo. Democratizing mobile app development for disaster management. In *AIIP/Semantic Cities@IJCAI*, pages 39–42. ACM, 2013.


[7] `https://ai-for-socialgood.github.io`