Diversity, Equity and Inclusion Statement

Vivek Gupta
Computer and Information Science, University of Pennsylvania

I firmly believe that prioritizing diversity, equity, and inclusion in the computing field is of paramount importance. To begin, it is a matter of justice for historically marginalized groups who have been significantly underrepresented in computer science and STEM more broadly (Palid et al., 2023). Moreover, it is imperative that we actively work towards fostering diversity, not only for the sake of fairness but also because it is integral to the creation of superior technology. It is well-established that diverse perspectives, including those of minority communities, are essential for the development of inclusive technology (National Academies of Sciences et al., 2023). Leveraging my past experiences and insights, I am wholeheartedly committed to taking concrete steps to enhance diversity within our field, and I will do so through the following actions:

1 Past Experiences: Reflecting on DEI Journey

During my Data Science Group Activities. Throughout my tenure as the founding coordinator of both the Special Interest Group in Machine Learning and the Utah Data Science Club, I championed inclusivity to ensure that our groups welcomed students from diverse academic backgrounds, transcending the boundaries of Computer Science. Deliberately tailoring our activities, which included mini-lectures series, I aimed to address the needs of marginalized individuals who often encounter obstacles in accessing data science education.

Moreover, I was resolute in ensuring that our lecture topics spanned a wide spectrum of data science disciplines, encompassing various areas within the field. In the context of the seminar organization at the Utah Data Science Center, my commitment to fostering diversity shone through as I actively sought speakers from diverse demographic backgrounds, representing a plethora of social contexts, and embracing individuals of all genders. In our club/group member recruitment efforts, I placed a strong emphasis on inclusivity, striving to assemble a team that embraced a broad range of genders, thereby amplifying our diversity and nurturing a more inclusive environment. I continued to emphasize these values even after my departure as an advisor to both SIGML and the Utah Data Science Club.

During my Mentoring and Advising Activities. As someone originating from an underdeveloped country like India, I have had firsthand experience with the challenges and constraints that students from such regions often encounter. Consequently, I have made it a personal mission to place a strong emphasis on advising and mentoring students who hail from similar backgrounds. By actively mentoring and advocating for these individuals, I have worked to promote diversity, equity, and inclusion in the academic sphere.

I firmly believe that everyone should have access to educational opportunities and be able to pursue their academic and professional aspirations, regardless of their socio-economic background or the country they come from. In my role as an advisor, I have dedicated substantial time and effort to providing guidance and support to students, particularly those with limited financial resources and opportunities in their home countries. Approximately 70% - 75% of the students I have mentored come from lower- to middle-income families. These students often grapple with unique obstacles on their educational path, ranging from limited access to quality education to financial constraints. I have also composed letters of support to facilitate conference travel and other opportunities for these students. I have also made a deliberate effort to promote gender diversity in mentorship. Approximately 40% - 45% of the students I have mentored are women, as I firmly believe in the importance of empowering and encouraging women to pursue careers in traditionally male-dominated fields [1]. By doing so, I have not only contributed to enhancing gender diversity but have also reinforced the principles of equity and inclusion in my advisory role. My commitment to advising students from underrepresented and underserved regions reflects my dedication to fostering a more equitable and inclusive educational environment.

2 Towards a More Inclusive Future: Advancing DEI

My Research Group. I am committed to establishing an inclusive and supportive environment for all students within my research group. While recruitment is undoubtedly vital, it is equally imperative to prioritize diversity, equity, and inclusion (DEI) throughout our collective journey (Moreu et al., 2021). I

[1] https://msmagazine.com/2021/07/26/data-science-diversity-gender-women-stem/

will consistently underscore my dedication to DEI principles and maintain an 'open door' policy, encouraging students to freely discuss any challenges they may encounter. Recognizing that bias is an ongoing challenge, I will proactively educate myself and champion inclusive values in shaping the culture of our research lab.

Outreach Opportunities. To bridge the diversity gap in computer science and data science, it's essential to engage students early in their academic journey, particularly in high school (Shams et al., 2023; Moore et al., 2021). Initiatives such as coding camps and data analytics workshops can ignite students' passion and expand their horizons. Leveraging my expertise, I'm dedicated to establishing outreach programs that elevate computer science and data science literacy among middle and high school students through REU and K–12 education programs (McGee et al., 2023). These programs will introduce students to the exciting world of these fields while instilling a strong ethical foundation.

Continuous Learning. I'm dedicated to continually improving my cultural sensitivity as an educator through continuous learning. My responsibility is to create an inclusive environment by: (a.) Valuing and respecting the diverse cultural backgrounds of both students and colleagues; (b.) Actively seeking out cultural learning experiences; and (c.) Staying informed about evolving cultural dynamics and social issues (Bhatti, 2021; Judd and McKinnon, 2021). These commitments ensure I can address the unique challenges students from various backgrounds may face and create an environment where everyone feels valued and empowered to succeed.

References

Haider Ali Bhatti. 2021. Toward "inclusifying" the underrepresented minority in stem education research. *Journal of Microbiology & Biology Education*, 22(3):e00202–21.

Karina Judd and Merryn McKinnon. 2021. A systematic map of inclusion, equity and diversity in science communication research: Do we practice what we preach? *Frontiers in Communication*, 6.

Ebony O McGee, Terrell R Morton, Devin T White, and Whitney Frierson. 2023. Accelerating racial activism in stem higher education by institutionalizing equity ethics. *Teachers College Record*, page 01614681231216518.

Jason H Moore, Van Q Truong, Ashley B Robbins, David Nicholson, and Clar Lynda Williams-Devane. 2021. Ten important roles for academic leaders to promote equity, diversity, and inclusion in data science.

Gil Moreu, Naomi Isenberg, and Markus Brauer. 2021. How to promote diversity and inclusion in educational settings: behavior change, climate surveys, and effective pro-diversity initiatives. In *Frontiers in Education*, volume 6, page 668250. Frontiers Media SA.

Olivia Palid, Sarah Cashdollar, Sarah Deangelo, Chu Chu, and Meg Bates. 2023. Inclusion in practice: a systematic review of diversity-focused stem programming in the united states. *International Journal of STEM Education*, 10(1):2.

Engineering National Academies of Sciences, Medicine, et al. 2023. *Advancing antiracism, diversity, equity, and inclusion in STEMM organizations: Beyond broadening participation*.

Rifat Ara Shams, Didar Zowghi, and Muneera Bano. 2023. Ai and the quest for diversity and inclusion: a systematic literature review. *AI and Ethics*, pages 1–28.