

Although computing and technology hold the promise of solving societal problems and shaping the future world, it has struggled to be inclusive and equal for many people in terms of race and ethnicity, gender and gender identity, socioeconomic status, students with disabilities, and so on. The lack of diversity and inclusion in our community not only deters newcomers from under-represented groups but also produces computational systems that reinforce existing bias and produce harm. As a researcher and a teacher in this field, I am committed to making the community I belong to a more diverse, inclusive, and equal place.

I strive to create a positive environment for students with diverse backgrounds. During my graduate studies, I had opportunities to mentor five women students and helped them to succeed in computer science. This experience teaches me how to be a strong ally to provide support and advocate for systematic change, even though I may not share many of the experiences that others have with such struggles. First, I learned the importance of outreach in making our community a more diverse and inclusive space. I met two of my students through the outreach program organized by Women in Computer Science. Outreach programs raise awareness and make opportunities accessible to prospective students. I plan to get involved in more outreach programs, including programs for K12 or racial minorities, and offer my time and expertise to make sure that all voices are heard. The second thing I learned is providing support is not enough. It is more important to make your support accessible. I need to take a more proactive role to offer help. Due to the unfortunate power imbalance in a mentor-mentee relationship, students may be hesitant to ask for support. Therefore, my approach is to ask if they face any challenges and what help they may need. It is also important to let students know where they could find resources to seek help. My goal is to create a more equal and inviting environment by reducing the power gap in the relationship with students.

Besides focusing on students in our community, considering who is missing and identifying potential barriers will make our community a more welcoming place for everyone to succeed. In the past six years, I have been involved in promoting students from under-represented groups in engineering education through spatial visualization skill training. I built an online platform to provide spatial skill assessment and training for first-year students interested in engineering fields. The platform enables early identification of students from under-represented groups who have less developed spatial visualization skills and provides assistance to increase their chances of staying in engineering. The platform has also been embedded into the advising program and further developed into a course that prepared students from under-represented groups with adequate spatial skills and aided their success in engineering education. I will focus on identifying and removing barriers for motivated students to promote diversity in computing and technology in my future teaching.

My commitment to diversity and inclusion has also guided how I approach my research by looking at the broader impact of computational systems on traditionally disadvantaged and oppressed people. One of my research focused on the issues of content moderation for social media. Through a series of participatory design workshops, we invited Black, Indigenous, and people of color, those in the LGBTQ+ community, and artists to discuss how to design for contestability in these systems. From listening to their experiences and ideas, we proposed a small set of fruitful, practical avenues for designing for contestability in content moderation systems. Beyond the research insights we gained, I gained a deeper understanding of how today's computational system reinforced the existing societal issues and harmed people from marginalized groups. In my future research, I will keep engaging with those issues and contribute my effort to make computational systems that will lead everyone to a better future.