SHURAN SONG   Diversity Statement

Increasing diversity not only makes for a more socially inclusive environment but also broadens the collective insight of the computing field as a whole. My past experiences have made me particularly aware of diversity, and have led to my participation in various activities focused on improving diversity-related awareness and increasing the accessibility of STEM education.

Outreach programs at Columbia. Over the past three years, I have worked with the AI4All program at Columbia – first as part of the admissions committee, then as an instructor, and recently as a co-director. AI4All at Columbia (part of the broader AI4All organization) is a joint effort across the Data Science Institute, Computer Science Department, and School of Social work. It provides a four-week summer program for high school students from marginalized communities, underrepresented in STEM, to enter technology fields. Despite the difficulties behind organizing events during the Covid-19 pandemic, we quickly adapted to the situation by creating an interactive robot teleoperation platform to allow remote students (e.g., from Louisiana) to operate a physical robot in our lab (i.e., NYC). This interface handles high internet latency and low-end compute hardware, minimizing potential hardware barriers. This system allows students to interact with robots in a way that still remains captivating, without an in-person visit.

In addition to AI4All, I also served as a faculty mentor for the SURE program. SURE is a Columbia and Amazon Summer Undergraduate Research Experience (SURE) Program. During this ten-week program, we host a SURE fellow (from backgrounds historically underrepresented in STEM fields) to work in our lab and engage in computer vision and robotics research. Besides summer research programs, I also served as one of the advisors for the Women in CS Student Group and helped organize activities around campus.

DEI efforts across academic communities. In 2022, I served as the Diversity, Equity, and Inclusion (DEI) Chair for CVPR. In our role, we help improve the inclusion and accessibility of the conference by overseeing the review process and organizing outreach events to engage local students (New Orleans in 2022). As part of the effort, we successfully launched the first CVPR Academy workshop for local HBCU students and a high-school Expo Tour in collaboration with STEM NOLA. The goal of our outreach to HBCUs and other minority-serving institutions was to take steps that ultimately might help increase the inclusivity of the vision community. In total, 17 invited students attended CVPR and participated in a half-day workshop. Invited students were paired with a mentor, who also agreed to meet with them on the first main conference day to help guide them throughout the conference. More information is on the CVPR Academy webpage. In addition to CVPR, I also regularly serve as a mentor for Women in Machine Learning (WiML) at NeurIPS, Grace Hopper Conference, Women in CS at Columbia, and Barnard BEARS – a workshop series preparing Barnard female students for research in CS. Through these activities, I hope to engage and inspire a diverse group of students to pursue careers in robotics and AI.

Moving forward, I would like to continue these efforts with existing programs, such as the AI4All and the WiCSE program. In addition, I have a few specific ideas that I plan to enact in the future as part of my dedication to building and maintaining diversity on campus.

Coding Club for non-CS Majors. First, I would like to strengthen the efforts in CS education for non-CS majors. I believe programming is a skill that can be helpful for all disciplines, and should be made accessible to all students regardless of major. We could, for example, start a coding club to provide informal tutorials to audiences outside of computer science and encourage them to learn techniques that they could bring back into their fields of study. One of my undergraduate advisees mentioned that she planned to major in politics when she started college. However, the summer programming camp for non-CS students gave her the confidence to choose CS as her major. Her story largely inspired my desire to initiate this program, as I believe that this kind of outreach will benefit diversity in the computing field as a whole.

International Research Opportunities. Second, I would like to expand summer research opportunities to international students. While AI4All and SURE programs provide excellent opportunities, both programs are limited to domestic students. Personally, I would have never had the chance to engage in research had I not participated in the International Research Opportunity Program (IROP) at my undergraduate college (HKUST). This program funded my summer visit to MIT and resulted in my first publication at ICCV. With programs like this, we could lower the barrier of entry to international collaboration and encourage students from other countries to establish research connections with our own students on campus. These experiences will help students enhance their communication skills while promoting greater awareness and understanding of different cultures.