QIAN ZHANG — DIVERSITY STATEMENT

Despite the public’s awareness of diversity and equality, the substantial gender and race gap is still increasing in our computer science (CS) community. According to the U.S. Bureau Labor Statistics in 2020\(^1\), only 25.2% of computer and mathematical occupations are held by women, 9.1% by African American, and 8.4% by Hispanic or Latino. Notably, the ratio of women working in CS and mathematics has decreased by 0.4% since 2019. Such a gap has led to important groups of users being under-served by existing computer systems. One recent study\(^2\) on health systems demonstrates that millions of African Americans are affected by racial bias in the underlying AI algorithms, reflecting inadequate testing for racial bias.

As a woman in CS, my undergraduate, graduate, and postdoc experiences have benefited from opportunities for women in CS, as well as supportive and unbiased mentors. I thus understand the value of promoting an atmosphere of inclusion and encouraging students with different backgrounds. These experiences have shaped my following diversity focus.

**Enriching Educational Resources.** Growing up in a rural area, I am well aware of the inequality of educational resources and the prejudiced gender stereotypes. I was discouraged from studying engineering during adolescence, and I did not take my first CS class until college. I was afraid to speak up in class in front of students with well-established CS backgrounds. Thanks to one female instructor, Ms. Xiaojuan Zheng, who occasionally advised me on programming contests (PCs), I finally gained confidence in studying CS. Since then, I have realized the importance of creating more educational resources for junior female students in CS. In response to the small number of female students engaging in PCs, I proposed and launched an organization called “Girls Who Like PCs,” which aims to help female undergraduates who were self-doubting about their programming skills. We invited senior students to conduct biweekly workshops and tutorials on various programming topics using Codeforces. The university’s first female-only collegiate programming contest in 2010 was a success.

**Implementing Outreach Activities.** Having supportive mentors is vital to the success of female students. It was especially important to me when all of my family members were negative about my chances of getting into male-dominated Ph.D. programs in CS. My Ph.D. advisor, Prof. Qiang Xu, invited me to the lab tour and strongly supported me in my applications. I finally became the only female student in my lab. To actively encourage more female students to pursue graduate education, I helped organize a monthly social event for networking with outstanding alumni and female faculty. I also volunteered to talk about my research when I was a TA. Two female students, Yi Juan and Ye Tian, joined my projects, and Ye became a Ph.D. student in my lab. I suggested enhancements to strengthen their research approaches, participated in discussions to overcome research challenges, and advised on how to tailor submissions towards particular conferences. They have both produced research papers during my mentorship.

**Creating a Sense of Belonging.** As an international student from Asia, I understand how easy it is to become more introverted and anxious when you are not part of the dominant culture. At UCLA, I am fortunate to be part of a diverse research group. We have students from all over the world, including Egypt, India, China, Iran, Pakistan, and Canada, as well as different religions, such as Christianity, Hinduism, and Islam. We share our struggles and support each other, such that everyone feels like they belong. I am also grateful to my postdoc advisor, Prof. Miryung Kim, who encouraged me to speak up about my feelings. These personal experiences have motivated me to foster a diverse environment in my own research group.

Looking forward, promoting diversity must enable equal opportunities for students with different backgrounds in terms of color, ethnicity, gender, religion, and other factors. I particularly want to help students from historically underrepresented backgrounds whose educational and economic circumstances limit their academic opportunities. I plan to continue and expand the above programs I have started. In addition, my agenda includes: (1) actively seeking NSF funds to recruit and train minority undergraduate and graduate students, (2) being a vocal role model when my experiences are relevant or a listener otherwise, and (3) incorporating diversity into my teaching materials such that all students can find their voices in class.

\(^1\)https://www.bls.gov/cps/cpsaat11.pdf