

Diversity is an inherently complex issue. Even though our community has been putting great effort into promoting diversity, equity, and inclusion for decades, the reality is that many of us are still left at disadvantaged positions for uncontrollable reasons. As a first-generation international student, I faced great challenges in the initial few years of my research career. The unfamiliarity with the language and culture had a significant negative impact on my research progress and also mental wellbeing. I was lucky to be warmly supported by my advisors, family (remotely from the other side of the planet), and friends during that struggling period. Many others who face similar or more challenging issues, like gender bias, ethnicity bias, and disabilities, need more support. For example, according to the latest CRA Taulbee Survey<sup>1</sup>, only 24.7% of the 2020–21 Ph.D. degrees were awarded to females, and only 0.2% to nonbinary genders.

I believe diversity in the computer science community is important because research products from our field cause almost immediate impact on the entire society, and thus it should guide the world towards a more equitable future. It is exciting to see many movements and events across the community in this direction. I actively participate in some of these events and encourage people around me to do so. For example, I have taken several training lectures on advocating diversity offered in my department, and I have also participated in the poster sessions presented by underrepresented groups, such as the one in the EECS Rising Star workshop. Interacting with colleagues from underrepresented groups helps me better understand the challenges they face and how I can contribute to the diversity of the community.

As a professor, I will strive to create a research environment that welcomes people from diverse backgrounds to connect and collaborate, and ensure people from underrepresented groups have the support they need. The following are some specific ideas on how I plan to make contributions, some of which I am already contributing to as a graduate student.

**Supporting students from underrepresented groups and international students.** The most important part of my job will be to support students, in terms of both academic progress and mental wellbeing, during their precious years at the university. One of the two junior Ph.D. students I have mentored belongs to an underrepresented group, and I have been offering advice and unofficial mentorship to several others from underrepresented groups in my department. In the future, I will extend my support to pre-college education to motivate more people from underrepresented groups to join the computer science community. International students also face challenges due to transitioning into a different environment. Besides having offered numerous helps to international students in my group, I have also participated in programs to help new international students, including volunteering to be a tour guide during international student visits and being a student mentor in the ECE Partner Program in my department (where mentees are new graduate students and many are international).

**Motivating junior students to speak up.** It is important to help junior students, especially those from underrepresented groups, realize that they can and should share their ideas and thoughts. During my experiences of organizing two seminars, I tried various ways to motivate students to speak up. When they seem to be quiet, I will start discussing some easy questions (e.g., clarification questions like “what does this table/figure mean?”), so that junior students can join the discussion and start asking more questions. Recently, I started an experiment where I ask students to leave their questions and comments on a shared document before meeting, which has been very successful in motivating all students to share their thoughts during the meeting.

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<sup>1</sup><https://cra.org/wp-content/uploads/2022/05/2021-Taulbee-Survey.pdf>

**Creating diverse research environment.** I enjoy working with people with different expertise and from different cultural backgrounds. Due to the nature of my cross-disciplinary research (on software engineering + natural language processing), I have long-time collaboration with professors and students from other departments. Talking to people outside of my expertise area has been an important source of my research ideas. For example, in a seminar course I took where most of the other students were doing natural language processing research, I was inspired through talking about my research—without going into software engineering details—and listening to their feedback in the natural language processing ways of thinking. I believe it will be beneficial to create a diverse research environment for my future students, in which they can talk to and collaborate with others from different backgrounds.

**Connecting with industry.** I believe the computer science research community has the power and the duty to positively influence society. Thus, I value the connections between my research and industry because of its importance in getting research prototypes adopted in the real world. I served as a committee member in the Graduate and Industry Networking (GAIN) workshop at UT Austin, which is a networking event that connects graduate students with industrial companies. During my internships at Meta/Facebook (twice), I worked on deploying research prototypes to solve the software engineering challenges in the company, and I was excited to see them being integrated into industrial software development workflows. Two of my research papers were in collaboration with a software engineer at Microsoft, and many of my prior co-authors joined big industry companies, including Meta, Google, and Salesforce. I plan to leverage these existing industrial connections and build new ones to increase the influence of my research on solving real-world challenges.