Civilization is the encouragement of differences. —Mahatma Gandhi

I believe that diversity, equity, and inclusion (DEI) are extremely important: the full potential of human creativity can only be unlocked when we all rise above our superficial differences and unite our efforts for progress in science and technology.

My awareness of DEI is shaped by my own experience. When I started my college study in an engineering school, I realized with great surprise that only five out of sixty students in the class were female. This instantly reminded me of some claims that I often heard like "men are better at science and technology than women." Such claims turned out to be obviously false: the five female students all did well at coursework and one of them often ranked the first in the department. What made me further concerned is the broad impact of these claims. Particularly, I found that such biases drove many female students away from science and technology majors: some of them mistakenly believed in these claims, while the others felt uncomfortable staying in an environment dominated by such claims. After coming to the United States, I have observed similar problems here: imbalance (e.g., gender, racial) exists in various disciplines of science and technology. Through my own experience and communication with people from underrepresented groups, I have learned that such imbalance had resulted from broad and long-lasting social biases and inequalities of opportunity. As a result, I was inspired to commit myself to the long-term goal of eliminating such biases and inequalities. In particular, I have taken the following approaches:

- *creating affirmative community.* I try to seize opportunities to help foster an inclusive community.
- *promoting opportunity equity.* I use my positions and resources to promote opportunity equity.
- *inclusive teaching and advising.* I am diligent in ensuring that my teaching and advising is inclusive.

In this statement, I will share my past experiences and discuss my future plans.

Creating Affirmative Community

During my internship at Microsoft Research in Seattle, I had the opportunity of meeting a female student who majored in English literature but had a strong interest in computer science. However, she was concerned about her chance of success and fitness in the community. Encouragingly, I convinced her to start learning Python and solving the introductory questions on LeetCode (an online platform for coding exercises). Through these efforts, she built up confidence and developed a greater interest in computer programming. Afterwards, she enthusiastically took the online courses that I recommended, delving into more advanced knowledge of Python, data structures, and algorithms. Meanwhile, I helped her connect with the supportive community of Microsoft researchers and engineers, further increasing her confidence. Eventually, she secured a software engineer job at a tech startup in Seattle, feeling surprised by and proud of the progress she had made on this journey.

The experience above strengthened my belief in the significant role that an encouraging and inclusive community can play, as well as the broad impact and positive changes that individuals can make. This belief has guided my actions. For example, when co-organizing the Workshop on Representation Learning for Natural Language Processing, I seized the opportunity to create a gender-balanced panel of invited speakers, providing a platform for diverse voices and sending a warm message to the underrepresented groups.

Promoting Opportunity Equity

When learning about the experiences of people from underrepresented groups, I feel a deep resonance with the great struggles faced by them. This resonance has shaped my belief that every individual deserves equal access to opportunities at all stages of education and profession. This belief has guided my actions: I actively participate in the activities that aim to produce future computer scientists, and take great care to recruit diverse participants.

While serving on the JHU CS PhD admission committee, I carefully calibrated the achievements of each applicant based on the resources and opportunities they had, doing my best to avoid unconscious discrimination of (say) gender, race, socioeconomic status, and geographic location. As a research assistant professor at TTIC, I have advised several undergraduate, Masters, and PhD students, taking great care to maintain a gender-balanced group of research advisees.

This year, I had the opportunity to involve an 8th grade female student in one of my research projects. Upon knowing her interest in computer science and artificial intelligence, I was excited to invite her to joining my research projects. However, she had too little technical background for research. After rounds of discussion with my collaborators, I finally managed to identify some concrete work that might be suitable for an 8th grade student. We pitched to her the project in which we investigated the capability of large language models in playing text games. Under mild guidance, she learned to prompt ChatGPT to play Zork, feeding the game states to ChatGPT and executing ChatGPT-suggested actions in the game. Furthermore, she enthusiastically experimented with multiple ways of prompting, making additional contributions to the research project. Through this experience, she gained an early experience in research and developed a deeper interest in computer science. This was a valuable experience for me, inspiring and enabling me to develop strategies to engage people from underrepresented groups in science and technology at an early age.

Inclusive Teaching and Advising

In both my teaching and advising roles, I am deeply committed to fostering an inclusive environment. In my courses, I go beyond the dissemination of knowledge, introducing not only the knowledge but also the creators of the knowledge, with a particular emphasis on the individuals from underrepresented groups. For example, when teaching the Frank-Wolfe algorithm in my Convex Optimization course, I gave an introduction to Marguerite Frank, a key contributor of this influential method and an inspiring female pioneer in convex optimization. When teaching programming, I often seek out opportunities to feature Grace Hopper, one of the first programmers in the world, as well as her significant contributions to computer programming (e.g., the creation of COBOL, an early high-level programming language). Through spotlighting the achievements of individuals from underrepresented groups, I aim to inspire all students to broaden their perspectives and see themselves and their peers as potential contributors.

Within my research lab, I am dedicated to the creation of an affirmative and inclusive environment, in which everyone feels valued and heard. In particular, I actively encourage open discussions and take care to be a good listener, ensuring that sharing thoughts and concerns is met with understanding rather than judgement. Furthermore, I often seize opportunities highlight the problem of social biases and inequalities, encouraging my students to learn about this issue and participate in the efforts of resolving it. For example, when discussing large language models, I draw attention to the problem that online text contains harmful content (biases, stereotypes, and more) that can be inherited and amplified by large language models. Such discussion has raised awareness of my students in the ethical dimension of their work. One of my undergraduate advisees has been inspired to delve into research in measuring and mitigating this issue.

Future Plans

Looking ahead, I will continue my commitment to promoting diversity, equity, and inclusion, building upon the positive initiatives that I have taken in both my teaching and research endeavors. The tenure-track faculty position will give me greater opportunities to make greater impacts. In particular, I plan to partner with K-12 schools—through the university's programs and other local organizations—to engage people from underrepresented groups in science and technology at an early age. I will attend DEI-focused events to connect with people from underrepresented groups, understanding their unique needs and offering my help. I will also continue my actions that help increase visibility of underrepresented groups, exploring new ways such as featuring diverse speakers and role models in the seminars that I co-organize. In addition, I will stay open to feedback and learn from experiences to refine my strategies.