

DIVERSITY STATEMENT

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Diversity has long been believed to be one of the main impetuses for the advancement of science and technology. An academic environment with equal opportunity for everyone will provide the students with positive and uplifting learning experience, foster original and impactful research, and build trust and respect among people from different genders, cultures, and races. As an undergraduate and then a Ph.D. student at Rice University, as well as a post-doctoral scholar at the University of California, Los Angeles, later, I have been living in a multi-cultural and multi-racial environment, which enriches my experience and enables me to understand the challenges and benefits of diversity and to appreciate diversity, equity and inclusion. The university's diversity, equity and inclusion cultivate my passion to pursue an academic career. In the following, I will describe my graduate and postdoc experiences on these topics and my future plan to promote diversity, equity and inclusion when I become a faculty member.

While I was a Ph.D. student at Rice University, I was fortunate to be a teaching assistant for the deep learning courses, in which I had the privilege to interact with both female and male students coming from different countries with different native languages. This experience has allowed me to promote academic and educational diversity, equity and inclusion. In order to enhance students' positive learning experience, I adjusted the teaching materials and styles in accord with their diverse cultures and interests. During the office hours, I encouraged students to participate in (peer) discussion so that they could learn from others' perspective and gain an appreciation for the similarities and differences among their cultures. Finally, I strove to provide students with equal access and opportunity for expressing their opinion and understanding about learning materials. For instance, if students were unable to follow the lesson during my office hours and became less motivated to involve in discussion activities, I would try to make the lesson more accessible to them and create more interesting activities so that they were willing to participate. I also encouraged female students in my classes to pursue a STEM career and helped them to be passionate about this.

In my collaboration with researchers at the California Institute of Technology (Caltech), I mentored a senior undergraduate female student in the Summer Undergraduate Research Fellowships (SURF) program and a junior Ph.D. female student doing research in optics. Both of them made an important contribution to the research project on incorporating a recurrent generative feedback into the deep neural networks. This project results in a paper accepted at the Conference on Neural Information Processing Systems (NeurIPS), one of the top conferences in machine learning. My undergraduate mentee was then admitted to the Ph.D. program in computer science at Princeton University, and my junior Ph.D. mentee later changed her research focus to machine learning and succeeded in this new research direction.

Recently, I have been mentoring another undergraduate female student who majors in Economics in an Artificial Intelligence (AI) Residency program. Despite her major in Economics, her academic passion is machine learning and mathematics. I have encouraged her to pursue a Ph.D. degree in machine learning and guided her first research projects in machine learning. Working together, we have had one paper accepted to the International Conference on Machine Learning (ICML) and two papers submitted to the Conference on Neural Information Processing Systems (NeurIPS), as well as another paper submitted to the Transactions on Machine Learning Research (TMLR).

Besides promoting diversity in teaching and mentoring students, I have also collaborated with a diverse group of researchers. My collaborators, both females and males, are coming from different countries and are at different stages of their academic careers. Collaborating with a diverse group of researchers broadens my perspective in modern research.

In the future, as a faculty member, I plan to participate and initiate several programs that help promote diversity among the departments and campuses. Together with my colleagues, I will organize deep learning and scientific machine learning workshops or summer schools that are dedicated to helping underrepresented minorities and woman find more opportunities in research and collaboration. As a faculty mentor, I will actively encourage more female and minority students and postdocs to participate in my research group. I believe that my previous mentoring experience will provide them with positive experience about cutting-edge research in deep learning and scientific machine learning. As a member of graduate admission committee, admitting students from diverse backgrounds and cultures is one of my main goals. Department and campus cultural diversity will improve educational and research experience. As a teacher, I plan to continue enriching and integrating diversity in classroom. My hope is that through my lessons, students will gain an appreciation of diversity and understand its importance to build trust and respect among different cultures, genders, backgrounds, and races.