

As an educator, embracing difference and supporting inclusion has been the most important philosophy for my research, teaching, mentoring and service to the community.

First, I have experienced a huge cultural transition moving from China to the US 6 years ago. As an example, self-promotion is critical to seeking opportunities in the US, but might be considered as aggressive in my own culture. One effective strategy I have used is to keep an open mind and communicate differences. I strongly advocate for fostering an environment where people from different backgrounds can safely exchange ideas and grow together.

Second, my research goal is to make high quality educational resources accessible to more people. I first became interested in research in college when I developed an Augmented Reality game for 8th graders to learn chemistry. I tested the tool in a school in China, and two kids came to me after the class and said: “I never thought learning could be so much fun.” That was one of the most rewarding moments in my life and brought me into doing research about teaching and learning. I did my masters at Harvard Graduate School of Education, where I was amazed by the diverse and significant impact education research could have on people’s lives. I read about field work using visual analysis methods to understand pregnant teenagers’ fears through their drawing; I was inspired by the rigorous experimental research on the effects of national education programs, such as after-school programs; I got very excited knowing TV programs such as Sesame Street could have long-lasting positive impact on kids’ English and math literacy. The diversity and inclusivity nature of education research got me excited and I was determined to pursue a PhD at the intersection of Computer Science and Learning Science. I am in particular interested in scaling higher education to make it accessible to more people. There are two challenges I focused on, 1) I leveraged natural language understanding techniques and the written data produced by past students to enable content creation at scale [C.12, C.13, C.15]; 2) I designed interventions to support people from different perspectives to have in-depth conversations [C.6, C.7, C.8, C.11]. Throughout my research, I have worked with hundreds of students and teachers to investigate ways to support learning and teaching.

Third, I thrive to make broader impacts from my research through deployments. My research on UpGrade [C13] has been used in 7 modules of 8 classes at CMU to support instructors in creating practice questions. So far, more than 400 students have learnt with UpGrade. This research product was also recognized with the NSF I-Corps @ CMU Program for commercialization opportunities. In my collaboration with the MIT Teaching Systems Lab, we designed a teacher training platform ELK ([link](#)) [C.14], which has been deployed in multiple schools.

Fourth, as a woman in computer science, I have been an active advocate for women in STEM fields. I have participated and led activities to encourage girls and women to join STEM fields, including a session in the CMU TechNights program ([link](#)) in which I taught Scratch to middle school girls, and a Community STEM Night event at a local school in which I demoed robots and explained recommender systems to kids and parents. I also served as a mentor for the CMU OurCS program ([link](#)) in 2018, which is a workshop to encourage undergraduate women to explore Computer Science research. I contribute to diversity and inclusion through mentoring. The students I have mentored have diverse backgrounds in psychology, design or computer science. Five of them are female. Four of them who have graduated all successfully moved on to industry or research positions.

Finally, I contribute to diversity and inclusion through building interdisciplinary research communities. I have been an associate with CMU PIER: Program in Interdisciplinary Education Research ([link](#)), where doctoral students from a variety of schools come together and share research. I was an organizer for the PIER student seminar for a year. Such diverse research communities can be powerful in facilitating collaboration to tackle big challenges.

As a faculty member, I will continue my efforts and seek new opportunities in promoting diversity and inclusion. I will lead by example, and actively construct supportive environments where everyone feels safe and valuable, and people from diverse backgrounds can effectively work together.