

I vividly recall a moment when a male doctor attempted to persuade me that women were ill-suited for successful careers as surgery operators. He presented his observation, suggesting that the scarcity of female surgery operators indicated their inability to handle the demanding workload. I then decided to fact-check the information he provided. A simple online search revealed that there were 32,876 registered female surgery operators, constituting 48.8% of the total. This incident offered a response to a question that had been weighing on my mind: *why is visibility so crucial for female researchers in a male-dominated field?* The doctor's misconceptions can only be dismantled when more women like us are visible and represented. With this realization, I acknowledge my responsibility to demonstrate to aspiring girls that they can excel in computer science or other STEM fields, regardless of any reservations they may have due to the field's predominantly male nature. By being visible in computer science, I can serve as an inspiration and empower girls to embrace their own potential and pursue their dreams fearlessly, much like how I have been inspired by female role models, such as my advisors Ruzica Piskac and Mariana Raykova, on my journey.

As a woman in computer science, I have been fortunate to experience the positive impact of support systems and mentorship for women in this field. However, it is disheartening to witness the persistence of gender stereotypes. Throughout my extensive experience in computer science, I have encountered instances where individuals have attempted to undermine female abilities based solely on gender, perpetuating the notion that men are inherently more skilled in STEM subjects. While these encounters have only fueled my determination and resilience, they have also highlighted the detrimental effects of such stereotypes on women's confidence and self-belief. I am unwaveringly committed to challenging and dismantling these stereotypes, striving to create a more inclusive and supportive environment for women in computer science.

During my Ph.D., I had the privilege of mentoring students from underrepresented backgrounds contributing directly to fostering diversity in the field. One exceptional mentee was Yichao Cheng, an undergraduate student at Yale University. Yichao joined our research group to work on privacy-preserving techniques for formal verifications as part of her senior thesis. At the outset of her journey, Yichao required more understanding of cryptography and research methodologies. I provided her with explanations on essential cryptographic primitives such as garbled circuits and oblivious RAM. Through our regular and productive weekly meetings, Yichao gradually gained confidence and assumed a leadership role in our collaboration. Even after her graduation, our collaboration continued, resulting in a joint paper published at INFOCOM [2]. Mentoring Yichao has served as a constant reminder of the importance of supporting and encouraging female students and the incredible potential they possess.

Another gainful experience of advising Qiuyue Qin, a dedicated and highly intelligent student from Xiamen University. During our interactions, I noticed her inclination towards shyness, often choosing to remain reticent and deferring to her male peers when it came to presenting their progress and contributions. Despite her meticulous work ethic, she tended to become more nervous when making occasional mistakes. Recognizing this, I encouraged her to voice her thoughts and delve into the finer details of her work during group meetings. It became evident that Qiuyue possessed an impressive grasp of every aspect of her projects, even though she seldom mentioned them. To develop her confidence, I scheduled separate meetings with her, where I provided a more supportive environment for open discussions. During this process, I offered positive feedback and reassured her that making mistakes was a natural part of learning. Gradually, she showed greater self-assurance. Following this mentorship, she published her first paper [3]. It's important to note that Qiuyue's experiences are not unique. Previous research, such as Beyer's study in 2003 [1], has highlighted that female computer science majors often exhibit lower confidence in their technical skills than their male counterparts who are not majoring in the field. As a female in the computer science field, I personally understand the subjective impact of these objective findings and the long journey required to establish a system and environment that bolsters the confidence of female students in this discipline.

Inspired by the support and encouragement I have received from the computer science community, I am committed to paying it forward and fostering diversity by cultivating a research group that embraces individuals from all backgrounds. To achieve this, I have devised a two-fold plan. Firstly, I am determined

to actively seek opportunities to visit and engage with schools that have historically had underrepresented computer science students, including women's schools. By speaking at these institutions, I aim to inspire and motivate students, particularly those from underrepresented backgrounds, to pursue careers in computer science and research. Additionally, I will establish connections with organizations and groups focused on supporting women in computer science, offering my services and organizing mentoring workshops and events specifically tailored for underrepresented groups.

In addition to my dedication to supporting women in STEM, my efforts have extended to inclusive education and assisting students with special needs. During my Ph.D., I participated in a project to develop software for students with special needs. These students encountered limited verbal communication abilities and restricted motor skills. Regrettably, the available technologies were either incompatible with their motor capabilities or necessitated costly hardware. To bridge this technological gap, we designed software that facilitated communication for nonverbal students through a simple switch or even without any additional hardware. This experience held deep personal significance for me, shedding light on the significance and complexities of education for students with special needs.

Beyond my research group, I understand the significance of creating an inclusive environment for all aspiring computer scientists. I am committed to providing support and mentorship to individuals from underrepresented groups, particularly female students, and empowering them to thrive in computer science. Through my active involvement in various initiatives and organizations, I aim to help students from all backgrounds excel and contribute their unique perspectives to the field.

References

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