It is a tremendous privilege for me to be even applying for a faculty position right now. I was very fortunate to get the support from many people. However, people from underrepresented communities may not have the support they need to pursue the careers they want. I wish to do my best to pass it on to future students.

Current diversity efforts

I have participated in activities organized by Women at College of Computing at Georgia Institute of Technology, and I have participated in the Women at Cybersecurity workshop. In these events, I have learned common biases towards women and underrepresented minorities in computing, and methods to eliminate the bias. For example, when providing a recommendation letter for the woman undergraduate student I have worked with, I need to stay away from adjectives that describe stereotypes such as "compassionate' and "helpful", and instead emphasize accomplishments. We all have unconscious bias, and I believe in becoming aware of the bias and following concrete steps to address the bias.

For many social-economic reasons, women are usually discouraged from taking the same kinds of risks as men, and they are usually urged to follow a safer path with less uncertainty. I believe in letting students choose their own paths, and if something they want is outside the norm, they should not be stopped just because of gender. I have mentored three women undergraduate students with their research projects at Columbia University. One of them told me that she wants to solve hard problems, but companies in the industry are not working on these problems right now, so she wants to pursue a PhD degree. I am currently helping her with PhD program application materials, and encouraging her to be ambitious about choosing hard problems to solve.

Future diversity efforts

As a faculty member, I would like to continue participating in the Women in Computing activities in the school. I plan to continue mentoring women students to overcome difficulties in their careers.

I am interested in volunteering in a committee in the graduate student admission process in the department. I would like to help review applications from underrepresented groups, to make sure that no student is overlooked and to identify strong applicants from diverse background. Some hiring and recruiting policies can mitigate the bias towards underrepresented minority groups. Recent research from Kleinberg and Raghavan [1] has shown that using a basic selection mechanism for hiring, the Rooney Rule, we can not only improve the representation from different groups, but also maximize the utility of hiring goals. On a high level, the Rooney rule says, one of the finalists being interviewed for a position must come from an underrepresented group. I am interested in learning more about different selection mechanisms to mitigate the implicit bias, and I would like to raise awareness of these selection mechanisms for graduate student recruitment.

I am also interested in raising awareness of how technologies marginalize people and hurt diversity efforts. For example, algorithms are increasingly used for lending, healthcare, and hiring. The learned algorithms are biased because the collected data is biased, and the engineering teams who train the algorithms do not have sufficient representation from different groups of people. I have come to know some friends in Computer Science who are first-generation college students in their families, and it would not have been possible if the algorithms denied them financial aid, health insurance, or college admission. There is a lot of ongoing research towards these issues. I do not know what is the solution, but we must be aware of the bias in technologies, and be very careful when we use algorithms in any decision making process.

References

[1] J. Kleinberg and M. Raghavan. Selection problems in the presence of implicit bias. In *9th Innovations in Theoretical Computer Science Conference (ITCS 2018)*. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik, 2018.