Diversity Statement

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Before I left home for college, I only understood the lack of minority representation in science and math at an abstract level: my mother is a math professor, several of my friend's mothers were also professors, and most of the talented math and science students during my time in high school were female. Even though I knew this experience was not typical at a global level, I was still disappointed by what happened when I left high school. In college, the number of women in my classes dropped precipitously and I did not take a single science or math course from a female professor. In graduate school, the number of female students dropped even further. At this point, many of my female high school friends have left science or moved to less male-dominated disciplines. This is quite disturbing to me: it both negatively affects the students who leave, and dramatically shrinks the talent pool for computer science.

One of the most obvious hurdles for improving diversity is that it is likely somewhat of a network effect: having too few people from any particular group in a field probably makes the field as a whole less attractive to people of that group. To correct for this, I will help advertise role models for under-represented groups, for example by inviting external speakers from such groups to give talks in seminars or colloquia on campus, or by supporting dedicated student interest groups. In this way, we can not only encourage interested people not to exit, but also hopefully attract new people to computer science.

Unfortunately, the same social issues that disadvantage minorities in college can result in significant imbalances in interest and preparation even before college. We can help deal with this by having high-quality introductory courses that are focused on generating interest in the subject. To take an example from mathematics, when I was an undergraduate there was an introductory course that provided students who did not have the background for more advanced classes to nevertheless be exposed to many of the basic ideas of linear algebra, topology, or analysis - topics that most mathematicians acknowledge as truly interesting parts of the field, but which are usually reserved for after one has ploughed through various calculus classes. This taste of more advanced topics can significantly boost morale: all of the people I know from college that pursued graduate studies in mathematics either took this introductory class or arrived with a lot of background already. I therefore believe that having these kind of strong introductory options is a good way to recruit students with disparate backgrounds.

However, in addition to these "positive" actions, it must be acknowledged that there are some behaviors that are actively detrimental and should be curtailed. I have attended many reading groups, seminars, and meetings in my time as a graduate student and as a research scientist, and I have noticed an upsetting imbalance in the frequency with which women, other minorities, or more junior people are interrupted or talked over. I doubt that the people doing this harbor any particular malice - they are presumably just excited to contribute their thoughts - but nonetheless it is clear that this sort of thing contributes to the lack of diversity in computer science. Having observed this, I always make an effort to bring people who have been shut out in this way back into the conversation. As a professor, I plan to organize my own reading groups, and I intend to publish and enforce basic curtesies in attendees. Student tend to hold professors in a higher level of esteem than fellow students, so it is especially important for faculty to not only practice good behavior but also to gently call out poor behavior when they observe it.

Finally, at the graduate level, I think a lot of good can be done even by something as simple as showing up to programs intended to help foster diversity. As an example, I have regularly attended the poster session for women in machine learning at NeurIPS. Unfortunately, it usually seems somewhat sparsely attended to me, especially given the near-fire-hazard level of attendence at the general poster session. I think the situation has been improving, but regardless standing by a poster that no one comes to see is extremely disheartening. In order to be successful, programs like this require some commitment from community members. As a professor, I plan to encourage students to participate with me in diversity-boosting programs. I hope this will not only help develop more diversity in computer science, but will also increase creativity by exposing students to more viewpoints and ideas.