

I will be honest — I first thought I was approaching diversity, equity, and inclusion (DEI) as somewhat of an outsider: I am a cisgender, heterosexual white male from affluent suburban northern Virginia. However, I have found that I can work as an effective ally both through scholarship in the area and through direct observation of students and faculty that are women or members of underrepresented groups. The more I teach and interact with students and faculty, the more apparent it becomes that computing is rife with inequity that precludes groups from otherwise fruitful participation. In this statement, I will describe my view of challenges associated with DEI and how I will work as an ally to improve DEI as a faculty member at your institution.

Having taught over 1300 students and formally advised 150 undergraduate students, I have had the opportunity to discuss DEI concerns broadly. More recently, as part of moving to remote education due to COVID-19, I have noticed an increase in students reporting mental health and accessibility concerns. In addition, I have witnessed the impact of sexual misconduct allegations against other faculty on the student body. To me, these alarming indicators suggest that I can help to improve culture and climate not just through *enhancing recruitment efforts* to focus on DEI, but also by *helping students understand DEI concerns* to create a more welcoming environment for all.

DEI Challenges

I believe the increasingly competitive culture in our community is also creating pressures affecting mental health. Students are expected to accomplish more in the same amount of time and with fewer resources. As class sizes grow, individualized attention from faculty decreases, and automatically graded assignments become more mainstream. My observation is that these trends create inequities among students who may not have the same level of preparation as others. Personally, I have been most struck by this when helping students from high schools without AP CS offerings and among students who have transferred from community colleges. I believe these issues can be addressed by (1) recruiting broadly with a focus on DEI, and (2) helping students to understand why DEI matters.

Addressing DEI Concerns: Recruitment

While I have been at the University of Michigan, the department has been large enough that enrollment for upper level classes typically exceeds 200 students. As a result, I observed students reporting imposter syndrome, mental health issues, and overall stress (particularly during COVID-19). In addition, I found that the large classes led to a competition for scarce staff resources where students would report feeling rushed or unable to get the help needed. One effort I have focused on while teaching has been to ask candidate instructional aides about DEI explicitly: I have found making DEI a top-level concern during an interview brings to light candidates who have been affected by and know how to work around DEI issues. Based on student feedback, I believe the instructional aides I recruited following this practice were viewed as more welcoming and inclusive.

I have observed a similar pattern in hiring research assistants. My more recent undergraduate research mentees have brought to light a number of fertile research problems related to DEI. For example, my mentee Anthony Zheng was particularly interested in accessibility of ML models in geographic areas that did not have the computing infrastructure to use state-

of-the-art deep neural networks. More recently, my mentee Scott Andersen has become interested in accessible computing infrastructure for non-English speaking countries. I have found that these students have stayed more engaged and motivated throughout the research process because of their personal investment in solving a problem. As a result, I believe student research has improved by having an explicit focus on addressing DEI concerns. I intend to continue this practice both for instructional aides and research assistants in the future.

Addressing DEI Concerns: A Welcoming Environment Through Understanding

I believe that addressing DEI takes active effort — that allocating time and resources is an important prerequisite if change is to be made. My observation is that students feel they do not have an avenue for communication with faculty. Instead, they perceive that one-way official statements made by departments or proclamations from deans reign supreme. Thus, the first step in addressing DEI concerns is to be an ally — one of the best things I can do is to just listen to concerns that students have, even if I do not have personal experience dealing with those concerns.

Having directly witnessed sexual misconduct allegations made against other faculty, I am acutely aware of the delicacy required to effectively communicate with students. The Department asked me to take over teaching a class mid-semester based on the response to that incident from the student body. I had to very carefully navigate frank questions from students in a situation where I had incomplete information but where I wanted the students to be able to complete the course successfully. Moreover, I learned a great deal about the nature of the concerns that students have when communication is incomplete — that speculation understandably runs wild. I have found that, even when I cannot disclose all information or when I cannot commit to making a particular change, students benefit from being able to share concerns. Finally, I have also found students benefit from candid discussions of DEI since it prepares them for relevant problems in the real world.

I have participated in departmental DEI Town Halls while at the University of Michigan, large discussions of about 100 students, staff, and faculty. Such activities have helped me understand student and faculty positions on DEI concerns, as well as the practical limitations associated with executing particular ideas. For example, students and faculty had a mutual misunderstanding about a minimal grade requirement enforced by the department — something that has adversely affected minority groups, but had not crossed my mind as a potential DEI issue before that Town Hall. Ultimately, participating in these activities have helped me to be a more effective ally with students and faculty from underrepresented groups.

In my own research group, I will recruit students broadly and encourage admitting doctoral students from diverse backgrounds. I will incorporate lessons learned from my teaching and advising activities at Michigan into future teaching activities. I have prepared lectures on bias, failure, and ethics that I will continue to present every semester in courses that I offer. I will work to be an effective ally as a faculty member as I enhance diverse recruiting efforts and work to create a welcoming environment.