Diversity and Inclusion Statement

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Diversity and inclusivity are the bedrock that ensures the longevity of talent in any field. Diversity and inclusivity in biostatistics represent 1) a reflective understanding of what hinders a student's interest in pursuing an education in our field and 2) actions to support each student's diverse learning trajectory. While my teaching statement focuses on my past engagement with teaching and inclusivity, I focus on my outlook on how I can contribute to a campus's diversity and inclusivity goals in this document. This document is not an exhaustive list, and commitment to diversity and inclusivity is a life-long commitment to learning how to serve the students and the broader community best.

For undergraduates: Staying ahead when supporting students

In undergraduate classroom environments, I plan to foster diversity and inclusivity by ensuring students of all backgrounds have the capability and resources to succeed. As biostatistics and biomedical research becomes increasingly interdisciplinary, our field will attract students from more diverse backgrounds. Some will have never coded before, some might have an aversion to dense math, and some might need help understanding the nebulous process of formulating and answering scientific questions with data. Hence, it is inevitable that courses need to adapt to the growing diversity of student backgrounds. I do not think this means "to dilute the course content." Instead, I firmly believe that course structures should be flexible, and the course mechanics should support avenues of constant student feedback. Based on my experience teaching 36-469 (Statistical Genomics and High Dimensional Inference) and my training at Eberly's Future Faculty Program, I plan to do this by 1) having students write down their confusions (anonymously on index cards, to be passed to the professor after every lecture) and 2) providing space in each homework for students to communicate what has worked (or not at all) so far in the course. By supporting lines of communication from the student to the professor, I can appropriately allocate more (or less) time to specific topics as the semester progresses, either during lecture or office hours.

Aside from course delivery, I will ensure the course mechanics are designed to account for potential special needs or equipment concerns. For example, biostatistics courses are transitioning to rely more on coding and data analysis, and there is often an implicit assumption that each student has a personal laptop. However, if a student informs me that they do not have a laptop, have I already accounted for this possibility in the implementation of coding lab sessions or office hours? (This happened in one semester when I TA'd 36-350 (Statistical Computing); fortunately, the department had a loaner laptop.) My responsibility as a professor is to proactively have solutions already in place when needed instead of only reactively finding accommodations after the fact.

For graduates: Promoting wellness and a sense of community

On the graduate level, I view diversity and inclusivity as a commitment to fostering wellness and a sense of community among the Masters and Ph.D. candidates with the other members of the department. A Master's or Ph.D. candidate's experience can be self-isolating and mentally taxing due to the ever-growing expectations of what "success" looks like in statistics and data science. While I have more agency in aiding the students I advise to achieve mental balance, it is nonetheless critical to support the wellness and mental health of all the students in the department. Towards this end, I plan to expand (or initiate, if none currently exist) current department programs to foster wellness and a sense of community. This is a challenging task, as students could be hesitant or unfamiliar with discussing wellness or mental health with a professor. Therefore, I hope to organize panels where professors can share their own Masters and Ph.D. experiences on non-academic issues. How have we (as professors who have been through the entire experience and more) found effective ways to manage time or projects? Have we felt imposter syndrome before, and how have we handled it? By sharing our own experiences broadly with the students, I hope the students would realize they are not alone. If appropriate, I also hope to organize optional meetings with small groups of students at a time at neural locations (such as on-campus coffee shops or lunch locations) to chat broadly about their educational experience thus far. These informal meetings would demonstrate that I (and the other professors) are community members invested in the student's success.

For outreach: Inspiring curiosity among the youth

Outside of the university environment, I plan to promote diversity and inclusivity on behalf of the biostatistics field by joining outreach initiatives organized by the department or university. For example, I wish to teach summer programs or local community courses in topics such as introductory coding or biostatistics/statistics. Many high-school courses in coding and statistics tend to be very formulaic and adhere to rigid rubrics for grading. While these teaching strategies provide transparent and explicit learning goals for young students, they can also discourage a student's future pursuit in biostatistics or statistics if they do not excel in those specific skills. Outreach programs are one of many ways we as members of the biostatistics community can clarify this to the youth. Since outreach programs are not constrained by rigid assessments, we can devote our efforts towards bringing awareness of our field to local communities or inspiring creativity and curiosity in biostatistics among the youth.