Title: Improving the Learning Environment of first year, first semester Computer Science students through Tutor and Demonstrator Unconscious Bias Training

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Overview:

Female participation in previously male dominated professions, namely law, medicine, business and biology has increased to parity or majority. However, in Computer Science (CS) and engineering, there is still a significant participation difference, commonly referred to as the gender gap. The *leaky pipeline* metaphor has been used to describe the likelihood of females (compared to males) leaving STEM fields throughout their lifetime. At the University of Melbourne, this is evident in that there is a clear disparity between females and males initially enrolling in first year CS subjects, which is followed by a steady decline in the proportion of female students in subsequent CS subjects. This attrition cannot be attributed to differences in performance in terms of marked assessments (which are similar between genders), suggesting that there may be other factors influencing the observed phenomena. We have identified classroom climate as one of the key issues that impact the experiences female students have in their learning.

In this project, we seek to improve classroom climate for all students; we expect that this will have benefits specifically for females but also likely for members of other underrepresented groups. We will approach this by giving our casual staff members, including tutors and demonstrators, *unconscious bias training* that will allow them to better manage bias and create a culture of inclusion during small group teaching. In the University setting, it is often casual staff members who most actively engage with students while delivering tutorials and laboratories, and hence we see them as playing a key role impacting the learning environment.

The project will focus on developing and delivering an unconscious bias training program to our casual staff, which is appropriately adapted to the context of CS teaching. The project will include a literature survey for best practices in this arena, and development of training materials for a one-hour training session. After delivery, we will monitor the impact of that training on the student experience through surveys.