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KPFP Impact Statement

September of my freshman year, I received an email from my high school's admissions office inviting me to apply to be a Shadow Guide and give school-day tours to prospective Bellarmine applicants. Recalling how much I enjoyed my Bellarmine visit in eighth grade, I eagerly applied, hoping to have a similar influence on prospective students. However, as I gave eighth graders an taste of my high school day, I thought my duties were simple like introducing my shadow to teachers and students. The full impact of my community service didn't hit me until sophomore year.

As my sophomore year began, while I mourned the departure of last year's seniors, I also noticed the fresh new faces of recently matriculated ninth graders. Often during passing periods, I would be walking to my next class when one of my former shadows would walk over to say hello. These sparse encounters over the year became daily interactions, as those once-eighth graders became close teammates and classmates. I was honored by the presence of these high schoolers, evidence that I had played a part in their decision to choose Bellarmine. They have helped me realize the full extent of my role in growing the Bellarmine community.

These experiences have proven to me the tangible influence a single person can have, connecting people and showing me the type of personal impact I want to have in my society. While I continue to serve my community in a similar way as an Admissions Tour Guide and Frosh Orientation Counselor at Caltech, I also see my studies as another way to benefit my community and improve the quality of life for people around me. I chose to major in Computer Science because I was especially interested in the seemingly limitless potential of both data structures and algorithms to accurately assess and solve day-to-day problems more consistently than people can.

I've seen firsthand how impactful this potential is, especially in medicine. At the Wall Lab at Stanford Medical School, I had the opportunity to work on developing a more efficient test to diagnose Autism Spectrum Disorder (ASD) in children. Autism diagnosis is a process that can 24 hours but still can be inconsistent and inaccurate at times. Working with physicians to design a custom one-hour examination and collecting a variety of discriminating features, I developed a machine learning classifier to classify individuals based on how well they recognized emotions and how engaged they were in the task. This classifier performed at accuracies comparable to standard diagnostic methods, potentially reducing diagnosis times by over 90 percent.

Similarly, at my current fellowship at the Magnetic Resonance System Research Laboratory at Stanford EE, I'm working on a pipeline to immediately identify the diagnostic quality of MR images after scans, greatly reducing the number rescans needed later on. Through both my studies and research projects, I've enjoyed helping improve the quality of life of others and hope to have more opportunity to do so in the future.

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