Promoting Diversity and Community Learning in STEM

"Making it" in America is subjective. In order to reach the success that accompanies the American Dream, my parents had to leave their home in Gujarat, work numerous jobs at once, face unemployment, and even go through food shortages. They struggled so that they could provide my sister and me with better opportunities. Watching my parents come here and struggle is my biggest motivation, both to have a different experience and to ensure that they did not do so in vain. This drive has pushed me and helped me find my passion for STEM. As the first in my family planning to attend college in America and a person of color, there is a lot of pressure to live up to, but I also find myself surrounded by support. In my county, my high school has one of the largest populations of minority students, influencing the culture and attitudes. We want to see each other succeed. Via this inclusive system we've created, my peers have not only challenged me, but encouraged my aspirations to grow and meet the high expectations that so many of us face, resulting in positive collaboration and competition. For instance, I've always aspired to work in robot-assisted surgery. By co-founding a school robotics team that quickly rose to #4 in the state and was recognized internationally, I pursued my aspirations and uplifted my classmates simultaneously. Growing up in Florida, I didn't see many leaders that represented people of color and provided them a voice in action, which is why I will continue to be an advocate for promoting STEM and breaking boundaries.

Underrepresented and minority communities across the globe struggle to develop a significant presence within the STEM field because of the lack of inclusive education. These minority groups must be empowered to pursue careers in STEM through community events and positive enforcement from educators. For these reasons, I started volunteering at the I Will Mentorship Foundation, a nonprofit dedicated to empowering disadvantaged youth to make positive life choices through a stem-based learning experience. This mission is not beyond the capability of high school students and it is important that we create these mediums of opportunity that foster inclusive innovation.

Alongside a team of mentors, I worked with underrepresented students in grades 6-8 during the summer. Our program ran for 2 weeks and incorporated students from throughout my local community, in which they were exposed to building and programming Lego Mindstorm robots, building and programming Raspberry Pi computers, creating cell candy models, and engineering their own bottle rockets. Through the vast assortment of programs, my team successfully taught 36 middle school students the essentials of biology, physics, and engineering as they relate to pursuing a career in STEM. At the end of the program, the participants recorded having a greater passion for STEM subjects and felt more intrigued about pursuing further education within our subjects. All of the students that participated in the event were

underrepresented groups in STEM with the majority of them being African-American and female. Through a safe learning environment, the program was a success because it truly altered the outlook of many of these students and I look forward to leading future efforts in the pursuit of promoting diversity, equity, and inclusion in STEM.

STEM programs have proven successful in application and its up to us, as the next generation of scientific innovators, to empower communities to achieve their full potential. Mahatma Gandhi once said, “You must be the change you wish to see in the world.” Through my personal journey, I wanted to inspire students to pursue a career they will enjoy and that will foster innovative experiences for them throughout their lives. As students of the future, it is our duty to contribute to an environment of learning that surpasses socio-economic conditions and embraces community learning in STEM.

Thank you for your time.