

UC DIVERSITY STATEMENT

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The American college and university system is (or should be) the great equalizer in society. Every student should be provided with the same opportunity to succeed and every effort should be made to support all students, including those that face unique challenges and those that may not fit the traditional transition from high school to college, lower division to upper division, and undergraduate to graduate level. In this statement I describe my own diversity as a vehicle to empathize with other students. I then discuss involvements in advancing education for underrepresented communities and how I incorporate various forms of diversity, equity and inclusion in my teaching practices and course content.

My Story

I am Mexican-American and grew up in Southern California surrounded by my father's family, all of whom were born and raised in Mexico. My mother is Caucasian, and was born in the United States, but grew up in a lower socioeconomic status than I did. Growing up in two different cultures provided me with two different perspectives of how different people experience life in the United States and in the education system. My father was a firefighter and my mother was a teacher. Both of my parents beat the odds and pursued careers for the betterment of their families, and it was never easy. Their work ethic was inspired by their environments and inspired me to both work hard, but to also give back and empathize with students that experience the world differently, to give them support and a chance to succeed. My mother credits a teacher she had that encouraged her to apply for a scholarship to attend California State University at Northridge, which she won. As an educator, that experience has stuck with me and taught me that one of my jobs is to remove barriers in student learning and advancement.

In high school, I was surrounded by students whose parents worked as doctors and engineers and worked for companies like Amgen or Rocketdyne. Mathematics and science came easier for them because they presumably had much parental support. Neither of my parents were required to take the level of math and science that I did, given my goals, and differences in the needs for their careers. I did not have as much support in these fields and at times could not perform at my potential despite my interests. I knew that I wanted to end at a Doctorate and knew that I wanted to study statistics or computer science, but I was not sure how to get there given my disinterest and difficulties in math. It was a very frustrating situation and I often thought to myself "if only I had a mentor to turn to." On a hunch, I decided to complete my math and science requirements at California's outstanding community college system, while still in high school, before starting my education in the UC system as a freshman. I found supportive faculty and I discovered a love for a field that I found very challenging. I learned a lot from these experiences. First, I learned that as an educator, I want to meet students where they are, and try to provide enough support and resources to help them perform at their potential. It also taught me about the challenges that transfer students have when beginning their journeys at top universities like UCLA. The expectations, pace, and level of competition are quite different.

I have 70% hearing loss in my left ear – I am hard of hearing. This issue sometimes makes it difficult for me to fully understand speech. I occasionally read lips, or prefer to have text that I can follow if needed. Students that are hard of hearing or have issues with vision and sight experience the education system very differently.

Prior to university, I experienced a great deal of pushback on many of my ideas, aspirations and passions and heard the word "no" frequently. While the pushback I received was due to diversity of thought rather than demographics, it inspired me to think about how people different from me must also experience similar situations and it led me to be open-minded to the contributions and aspirations of others no matter who they are. Our ways of thinking and approaching problems are based on our environments and the various characteristics that make us unique. This also includes neurodiversity and the fact that many students' brains work differently, and that we should try our best to closely consider these ways of thinking.

It was not until I started attending UCLA as an undergraduate that I felt my ideas and contributions were truly valued academically. UCLA's supportive scholastic environment allowed me to thrive. As a lecturer, I carry that spirit with me and I strive to celebrate the achievement and potential of my students, including their background as part of their larger story and path in life. Being predominantly a computer science lecturer, and a full-time employee in the tech industry, it is my belief that carrying the same spirit that UCLA instilled in me allows me to reach those with varying backgrounds and hopefully will inspire them too to go into tech and make it more representative of the population at large.

My Work in DEI

At Google, I had the opportunity to contribute directly to diversity and inclusion as an instructor of record for the company's Tech Exchange program, co-sponsored by and outstanding HBCU, Howard University. As the recruiting process at tech companies tends to focus on large public and private schools, programs like Tech Exchange are designed to encourage the highest performing students at HBCUs and Hispanic Serving Institutions (HSI) to pursue a career in tech by allowing students to take university courses at Google, and receive credit at their school. Participants came from schools such as Howard, Florida A&M, Morgan State, Spelman and Prairie View A&M as well as HSIs such as University of Texas El Paso and University of Puerto Rico. Despite the main host being an HBCU, the program hosted Black and Hispanic students as well as other students that were from low socioeconomic status households. In Spring 2019, I developed and taught a brand new course in Data Science. This required developing a completely new curriculum that taught the basics of data science, databases, R and also included a Howard University mandated section on probability. The course also included heavy discussion of bias in data analysis and bias in training data for machine learning classifiers. This topic tied in with several of Google's own DEI efforts with respect to biased data and its problematic uses in developing cameras and image search. For their final projects students could choose any topic for which they could find data, and many students focused on current social issues. Students focused on asking the right question and separating anecdotal data from scientific data. Some of the students shared that learning how to analyze data and perform a small research project was empowering. Some students even said that they became interested in becoming a data scientist. This program did not only provide college courses, but also provided students with 1:1 mentoring from instructors including myself, interview readiness coaching and encouraging students to complete the correct preparation needed to successfully land a job at a tech company.

In summer 2021, I served as an instructor for Google's Computer Science Summer Institute (CSSI). This program is designed for rising first year college students that have historically been marginalized in the field and introduces them to programming and computer science. The program was a 50% full time opportunity that is shared with my core responsibilities as a data scientist at Google. The goal of the program was to create "brave spaces" where students could share their thoughts openly with each other and with Googlers regardless of their prior experience or knowledge in the field. This is the type of support that sometimes gets lost at a large university, particularly among underrepresented students. The expected outcome of the program is an increase in confidence, skills, passion for computer science, and a tighter knit community that can support each other through their college computer science experience.

How I Incorporate Sensitivity to DEI in Teaching

My own experience in the education system dictates much of my teaching style. My intention is to encourage students to perform as best they can, with my support, regardless of where they started. Over my teaching career, students have approached me with feedback on how to increase equity in my classes. I feel it takes bravery for students to raise these issues, and I like to believe that my openness to the experience of others comforts students.

After the COVID-19 remote learning period, I have continued recording lectures so that students can access the material if they cannot attend class due to work schedules, or physical and mental health issues. This feature

also allows students to review the material again. This is good for students that may be more auditory or more visual learners, or simply need more time to process the lecture content. I feel this is also helpful for neurodiverse students that need to process the material differently from presented. The recording allows students to speed up or slow down my speech and allows them to watch the content as many times as they need in whatever order they need. Closed captioning is automatically provided by the platform I use (YouTube) for students that need it, including students that are hard of hearing. I have even, on occasion, moved some of the more tedious content into a pre-recorded lecture so I could focus on using lecture time to build connections between course content, and daily life in industry. I provide hands-on projects using relevant modern technologies for students that are more tactile learners and/or need to physically apply the concepts they have learned into a product.

My technical classes frequently involve discussion of machine learning, data collection and data usage. During these lectures, I present material about the importance of ethical data collection and ethical data use particularly for use with machine learning classifiers that help make “high stakes” decisions. In some classes, I teach students about accessibility and how different users experience a product differently. I encourage students to think about difficulties these users may have. For example, students should not forget to structure their product in a way that a user using a screenreader can process the information. I also discuss the importance of building engineering teams that are representative of the target audience of the product.

In my courses I also adopt policies that allow students with various needs to have the same chance to succeed as students that do not need them. For example, I have an inclusive late work policy that provides additional time, within reason, for students to submit assignments. I also encourage good mental health during my first lecture and again during my final lecture as these are topics that need to be destigmatized. I have also been experimenting with exam policies that ensure equity on open note exams. We are no longer in a society where every student has a printer, and printing at the University can be expensive or inconvenient. It is a tough issue that caught me off guard but that I wish to resolve.

The aforementioned policies and topics illustrate my commitment to supporting diversity, equity and inclusion in my teaching in various forms.

In conclusion, different experiences yield different approaches to problem solving and different perspectives, all of which can be harnessed to improve our society. I take seriously the responsibility of maintaining the University as an equalizer in society. I support diverse and underrepresented communities whenever I get the chance, and strive to provide an educational environment that values diverse perspectives, that is equitable and inclusive of all students.