I began my career as an electrical and computer engineer. I designed protections and controls systems for a power utility, supported new product development for electric vehicle products, and designed products for a new motor starter line. Despite the exhilarating technical challenges of my roles and the opportunity to work towards a better future in a green industry, I was struggling to find purpose and happiness in my work. The only source of fulfillment I felt was in an additional role that I sought out and created as Senior Design Program Coordinator. It was through mentoring students in this role that I found the excitement and fulfillment I was seeking. Under my direction, five projects were successfully executed providing meaningful experience to the students and valuable contributions to the company. In reflecting upon these experiences, it dawned on me. Teaching would be the perfect combination of my abilities, experiences, aspirations, and passion. Through teaching, I could empower the next generation to solve the problems they see in the world around them. After this revelation, I decided to leave industry and pursue a career in education.

An essential tenet of my mission in education is to make it more accessible to all. STEM education should be a creative practice that is liberatory. It enables people to improve the conditions of their fellow humans. Many talented people fall through the cracks of the educational system because there is no one in the field who shares their experiences and the information is not taught in a way that is relatable to them. They miss out on success and fulfillment, and their community loses an opportunity for representation at the forefront of "innovation". If the educational system does not take the extra strides to reach out to marginalized people, we have failed them and the world pays a price. In my role at Ravenscroft School, I designed a more-inclusive series of STEM electives entitled *Design & Making*. As opposed to many typical STEM electives named after cis, white, hetero, male-dominated industries like engineering, computer science, robotics, this course is intended to introduce a broader, more diverse cross-section of students to the makerspace and teach them through creating. While teaching ECE 109 at NC State, I took it upon myself to investigate how the course was negatively impacting retention and diversity within the department by assuming prior experience without any prerequisites. I redesigned the curriculum, surveyed students, performed research, and proposed a new course sequence to ensure everyone had the requisite knowledge and experience.

To foster a more inclusive learning environment, I utilize an interactive lecture style and project-based approach. By engaging in dynamic, hands-on activities, the students are able to interact more with the material and make very abstract and hard-to-visualize concepts come to life. These activities also provide students with practical problem-solving experience, developing their creative and critical thinking skills. By structuring the courses in this way, I am entrusting students with more responsibility. They feel more ownership over their own education. As a result, the students are more confident in their abilities and more invested in their work. This environment also ensures that students collaborate and learn from each other as much as they learn from me. As a cis, white, male, my experiences and perspectives dominate the world of STEM. By cultivating a more interactive classroom and ensuring that underrepresented students are given the opportunity to speak, everyone gains exposure to new viewpoints from the multitude of voices in the classroom and obtains a more well-rounded knowledge of the concepts. Because of this collaborative atmosphere over which they feel invested, students feel proud in their demonstrable mastery of the concepts and confident in their abilities to tackle new challenges when they leave my classroom.

Employing a dynamic learning environment can have its downsides. By allowing students more autonomy in the classroom, I struggled at first to achieve the intended learning outcomes. Students

would choose projects not in line with the course objectives, we would dive too deep into a certain topic, or dwell on a tangential concept. These circumstances would lead to uneven learning experiences amongst students or a reduced course scope. Despite these struggles, I never abandoned this style. I knew its potential and strengths from research. Through study, practice, and preparation, I learned how to more successfully scaffold and mold the course behind the scenes. I learned how to work with students to carefully craft projects that met the intended learning outcomes and roused their passions. I also recognized the importance of indulging in tangents. Throughout the course, students would become incredibly interested in a related topic. I did not want to eliminate curiosity from the classroom for the sake of achieving goals. Instead, I built time into my lessons where we could discuss a topic of interest, a current event, and other curiosities. These activities foster an environment of inquisitiveness. Despite the immense amount of effort required to manage this type of learning environment, the results of uniting students' passions and course material in this way are self-evident.

In my teaching career, I endeavor to bring more of a focus to ethics. STEM professionals, like elected officials, are a small group responsible for making important decisions that affect everyone. In this age where any technology we dream up is well within grasp, the question is no longer "Can we do this?" but "Should we do this?" New technologies and developments do a lot to benefit society but oftentimes can have latent, adverse consequences. I once attended a session at a conference in hopes of learning about the battery recycling process, but I left dismayed. Despite batteries' ubiquity and importance for renewable energy adoption, the industry is far behind understanding how to recycle the sheer volume of lithium-ion batteries in the market leaving us with an unimaginable amount of waste. To encourage more creative problem-solving and more critical thought about the role of engineers in society, we examine these cases and study the NAE's Grand Challenges for Engineering. We always begin by not only asking "Who benefits?", but also "Who does not benefit?". I strive to teach the next generation of engineers the authority of their role in society. I want to be sure they have the necessary tools to make decisions that do not sacrifice future generations' vitality for the sake of convenience.

In order to continually confirm I am exceeding the students' expectations and achieving the learning objectives, I try to tear down any barriers to having a responsive, open feedback loop between myself and the students. Instead of relying upon a summative assessment, I perform continual, low-stakes assessments. The goal in these formative assessments is not to penalize students but to ensure that I am effectively conveying the concepts to all students. I can track individualized student progress on a regular basis to see whether I need to modify my methodology for that student. I foster an open and communicative environment by having class-wide dialogues about course progress in addition to one-on-one meetings. If the students do not feel comfortable speaking up in these settings, I give them the opportunity to provide anonymous, written feedback throughout the course. I use the results of the assessments and the feedback from the surveys to tune my teaching methods to better suit the diverse makeup of students in that particular class.

I encourage an active learning environment to ensure I am teaching *to* students and not just teaching *at* them. I am an educator because I want to help produce a more diverse coalition of engineers who tackle the imminent problems facing our society rather than developing "better" and increasingly disposable tech gadgets that proliferate the issues we see in the world. I work to combine my technical abilities, industry experience, teaching experience, and passion to educate a future generation of scientists and engineers that is more diverse, compassionate, and empathetic. When my students think of the future, they should not feel pessimism but the opportunity and the ability to act.