Career Objectives and Background Essay

What has prepared you for this program?" *Up to 2,000 characters allowed for response*.

After graduating with high honors in 2016, I began my career as an engineer. Quickly becoming a valued member of the engineering team, I wanted to do more to improve my own skills. Within my first year, I realized the power of computer programming when I wrote a script to develop projected manufacturing needs at Company, a bearings manufacturer.

I began to take courses through Coursera, an online learning platform, in programming. I became obsessed, spending about 2 hours every day after work and even more on the weekend, I progressed quickly through the basics and started to move into more advanced techniques. As I moved from online class to online class, along with adding in personal research, I took on more programming projects at work and on my own. I modified my original manufacturing program to run quicker and more accurately and I developed programs to show yearly reviews on sales and engineering team performance, most used materials, and more to give non-technical members of the company a better idea of our statuses.

On my own time, I created a program to compile the skills and education for a given career field to show the most valuable attributes for that field. I found that data science fit exactly into what I loved and in order to excel as a data scientist I would need to continue improving my skills in statistics, computer science, and machine learning. My goal is to start my own company and I believe that as the amount of data being created increases, the ability to understand and analyze it will become a requirement for running a successful business.

Recently, while presenting a database I designed for Company, a government contractor, the lead software engineer looked at me and said “wow, I know your background is in mechanical engineering, but if I didn’t know better, I would have guessed computer science, you really think like a computer scientist”. I knew that I was ready to turn my online research into an advanced degree.

Statement of Purpose

Academic and career plans. Up to 4,000 characters allowed for response

Computer programming was always something I found fascinating. The ability to create unique insights out of large datasets that could never be found from standard searches made it seem almost like a super power. My goal is to start my own business and I believe that as the amount of data being created grows, the ability to analyze and understand it will become a required skill to excel in business.

I graduated with high honors as a mechanical engineer in 2016 and quickly grew into a valued member of the team at my company. Throughout my engineering projects, I found that I could use computer programming to analyze testing data, automate simple tasks, and visualize my results. I realized that because of my strong work ethic and education, I would always be able to succeed as an engineer, but to grow even more, I would have to learn to better understand computer science and how I could use it in business.

Coming from a mechanical engineering background, though unconventional, has become my greatest source of success. Mechanical engineering built strongly on my already very organized personality. I have found that because of this, I am able to break down complex problems, create solutions in a simple but effective way, and easily convey and work with teams of advanced as well as non-technical people. Additionally, my mechanical engineering background gave me a strong understanding of physical systems. This has been, and will be, integral in working with programs that relate back to mechanical applications, such as classifying manufacturing defects as acceptable or not or working in data produced in testing. Most of all, my mechanical engineering background gave me the confidence in knowing that I can accomplish anything I push myself toward.

While looking into all the different fields a computer scientist could end up in, I found that data science was where I wanted to focus due to its strong utilization of statistics, computer science, and machine learning. When looking at programs that focused on these same areas, Georgia Institute of Technology stood out from the crowd. Offering a strong computer science base with a concentration in machine learning, Georgia Institute of Technology seemed to be the perfect fit. After looking deeper into the curriculum and learning more about the courses, I could not help myself from getting excited at how intensive the machine learning concentration track looked.

As more and more patients come to doctors for medical advice, the quality of care declines. The simple reason for this is that each doctor has to be able to spread his or her time across more patients and, without any outside assistance, has less time to focus on each individual patient. Watson clinical trials deems to solve this issue. Using advanced machine learning techniques, Watson clinical trials is made to assist in note taking, care observation, and survey medical journal studies and clinical trials to assist in patient diagnosis. With Watson clinical trials, doctors will be able to spend more time with each patient, provide better care, and provide diagnoses based on data far too complex for any person to analyze without ever needing to leave their patient. This is what data science can do; use massive amounts of untapped data to predict insights faster and more accurately than any person ever could. Every day, more and more data is produced; each mouse click, every text message, and all the information from sensors create data. The amount of unused data is growing at an unparalleled rate. I want to learn to better understand and analyze this data through data science so that I can be a part of figuring out meaningful ways to use it and develop creative solutions to solve every type of problem.

Whether it is using storm data to better predict the damages a hurricane will bring or helping shoppers find the best deal, and everything in between, I want to be an integral part of using data to creating revolutionary solutions.