

I am pursuing a master degree in MS&E at Stanford University in order to further hone my engineering and management skills before I initiate my own tech business. My journey toward entrepreneurship began in my childhood, as I watched my parents manage our family business. My parents often told an anecdote, referred to as “鸡毛换糖 (Chicken Feather for Sugar),” describing local merchants exchanging sugar, which could be cooked with ginger, for feathers, which are made into feather dusters to sell. I was too young to recognize the economic momentum principle at play, revenue of any industry comes from price differences. Nevertheless, I was enthralled by the story, and many like it, and these anecdotes I heard in my childhood instilled in me a business sense and the aspiration to start my own business in the future. The MS&E program is especially appealing to me given Stanford’s reputation for having highly collaborative management science and engineering departments, which is critical, given the interdisciplinary nature of being an entrepreneur in the future.

From an early age, I have observed in awe how my parents’ business in manufacturing of clothes burgeoned. Yet, as I grew up, I began to notice some of my parents’ shortcomings: they were unlettered in science in a technology-driven era. Although they had good business instincts, my parents conducted business in the primary and secondary sectors. They could have cut labor costs if they had experience with automatic sewing machines, or could have made wiser decisions in brand expansion if they had been systematically trained in marketing analytics. Seeing this made me realize that I would need a solid scientific foundation to bring a traditional business to the next level. Furthermore, I started to realize that blending traditional work systems with digital technologies is imperative. For example, as labor costs skyrocketed, manufacturers had to eliminate the full cost of some employees on the production line with automated systems. Keeping this information in mind, I pursued my undergraduate education double majoring in mechanical engineering and aerospace engineering. Under the mentorship of Dr. James S. T’ien, who is a leader in thin fuel combustion research, I gained experience in aerospace research. While in his laboratory, I completed an undergraduate thesis, which was presented at a national conference for fire and combustion research, and submitted to top journals such as *Combustion and Flame*.

As the first one in my family to attend college and graduate school, I wanted very much to be successful and to make my parents proud. Though I worked very hard, I began to struggle with some anxiety early on in my graduate student life. Inflicted with anxiety, I dropped my course workload to a minimum and got bad grades in my second semester. In the beginning, I had a hard time understanding my panic attacks, but I soon learned that I could use coping skills to manage them, while also increasing my own self-confidence. I chose to acknowledge my anxiety disorder and gain strength from overcoming it. In 2016, I decided to run my first 26.2 miles at that year’s New York Marathon. It was empowering. Over time, I started to jog every day for an hour, and slowly my anxiety began to disappear. Today, I feel stronger because I fully appreciate what my initial struggle with anxiety has taught me: be positive and tenacious. As a budding entrepreneur, this was an important lesson to learn.

During my graduate study, my passion for technology and entrepreneurship continued to grow. I still remember the excitement I felt when learning how machine learning algorithms help high frequency trading companies make millions in revenue. Since then, I developed my interest specifically in machine learning and big data. I chose to undertake a demanding, yet highly

rewarding internship project for a start-up company developing algorithms for fraud detection using machine learning tools. The company was later acquired by PayPal, and my algorithm has been kept running. As simple as applying a well-trained logistic model to a seemingly meaningless dataset, using analytical skills wisely saved the company thousands of paychecks to underwriters, who used to label costumers' fraudulence by hand. At the same time, I participated in multiple case studies competitions sponsored by the Wharton School, focusing on the role of business strategy in technology industries. A fascinating business to study was Amazon, a company that kept losing money every year, and yet represents one of the greatest technology companies in the U.S. I learned, through my observations, that in order to maintain future market shares, Amazon Web Services were trading off millions of profits for potential customers in competition with Microsoft and Google cloud services.

Since graduating from graduate school, I had the opportunity to work at VMware Inc. as a software engineer. Aiming to provide the best internal cloud services for more than 500,000 enterprises from Marriott Hotel to JP Morgan, I always put the security requirement in first place, even in developing a minuscule feature, because this is the primary need of private cloud owners. In my first three months after joining VMware, I had been working closely with our project managers and companies to identify costumers' pain-points. My first project had a direct impact on hardening the security of one of our products. While growing my skills in software development and project management, I also learned the importance of understanding the management structure of a company. Specifically, as an entry level engineer at a giant technology company, I was able to see what entrepreneurship looks like from the bottom up. I believe that this unique observation will remind me to keep my employees' feelings in view a future leader of a company. Most importantly, to be a great leader, I will need to discern the subtle discrepancies in needs among my managers, my employees, and me. My experiences so far have contributed to forming and enhancing my objective of becoming an entrepreneur in a technology field. My goal is to choose an institution that shares my vision and ambition to lead the global march towards technology-enabled solutions.

In conclusion, I believe that my education and experiences so far have prepared me well to take the next step in my career, by completing Stanford's MS&E program. I came across this program while reading Professor Robert Sutton's "Good Boss, Bad Boss." His words, "How I do things is as important as what I do," sparked my interest in learning effective management skills. The curriculum provided by MS&E would enable me to master the needed skills for high quality start-up creation and concentrate my coursework in management and technology. In addition, the characters that appear in the program name, management, science, and engineering, map well to my past experiences. I have experience in management, as a leader at various students' organizations; as a lover of science, I have an ambition for using technology to change people's lives; and I have been building of solid reasoning processes, as a true engineer. My past work commitments and my skillset in technology and management have prepared me to contribute to the community in the MS&E program, and that this program would provide me with valuable training and networking resources and a cohort of exceptional peers.