I have always been curious about the complex and intricate mechanisms involved while making any product. To satisfy my interests, I chose the undergrad program in mechanical engineering. In this article I have tried to elaborate my aspiration to continue discovering concepts at an advanced level at Texas A&M University.

During my voyage through the course curriculum of mechanical engineering I developed interest in applications of numerical analysis in heat transfer and fluid flow. Consequently, I opted to work on a project that used numerical modelling and simulations. It involved determination of optimum residence time of slabs in a reheat furnace. While working on this I developed aptitude for using literature review and software tools to advance in research. This came in handy when I worked on an industry based project with one of my professors. Our aim was to develop an empirical relation between the RPM and power produced by screw turbines. I used ANSYS FLUENT to analyze the performance of turbines based on various flow parameters. I went on to present these results at a national conference titled 'Sustainable Mechanical Engineering Today and Beyond'. These events inspired me to pursue a career in research. I believe that masters at Texas A&M University would lead me towards my goal.

For increasing my experience in industrial applicability projects, I interned at Aditya Birla Group Corporate Business Excellence. The aim of this unit was to guide the manufacturing and service sectors of the conglomerate. Here I was assigned the task to develop a model to determine optimum parameters in a cement manufacturing mill. To achieve this, I used neural networks and global optimization in MATLAB. Finally, I designed a desktop application that calculated the optimum parameters. Here I learned to apply the theoretical concepts in practical circumstances. I plan to foster the necessary skills at Texas A&M University, to make significant contribution to the industrial research.

In my seventh semester I was selected to be a 'Teaching Assistant' for the course 'fluid mechanics'. My responsibility was to suggest minor changes to coursework, grading class tests and preparing question banks. This period helped me understand the challenges involved in academia. Furthermore, I developed an interest to pursue a career in academic research. In this regard, I believe Texas A&M University would be the perfect place to sharpen my skills.

I want to explore the themes of heat transfer, fluid mechanics and energy systems in depth. Therefore, I went through several of the engaging works by the professors at Texas A&M University. I found Prof. Meinhard T. Schobeiri's work on film cooling effectiveness of a highly loaded turbine blade to be exciting. The discussion on film cooling effectiveness engrossed me the most. Also, the work by Prof. Debjyoti Banerjee on role of carbon nanotube diameter on thermal interfacial resistance was appealing. The study on drag and heat transfer with respect to variation in the roughness patterns galvanized the interest in me. I wish to be a part of their research groups.

To sum up, I am passionate about the themes discussed above. My ultimate career goal is to pursue research in these areas, either in academic or industrial environment. When I studied the works of the professors and the achievements of the students I could relate them with my objectives. Motivated by this, I chose Texas A&M University College Station to cultivate the competency for research and overall development.