Tarun Kunchakuri

Industrial Engineering and Operations Research.

**STATEMENT OF PURPOSE**

“Time lost is money lost”. For an industry, it is important to manage its time. To manage time, one needs to plan and organize one’s work. It was this planning and organization that made Ford Motor Company reduce its chassis assembly time from twelve and half hours to an incredible one and half hours. It was for the first time the concept of moving line assembly was introduced since the inception of the industry. I believe this planning and organization forms the crux of industrial engineering.

Early in my teens, I always loved to create or produce things of my own. I made push back cars using caps and rubber bands, and made bow and arrows using PVC pipes. The physics behind these always intrigued me. Hence, I chose Mechanical Engineering as the major field of study in my undergraduate program from Vasavi College of Engineering. The well-structured curriculum of our university which subsumes an entire array of courses gave me deep insight and sound knowledge in the field of mechanical engineering.

During my internship in the 4th semester, I had a great opportunity to interact with the industrial engineering team at Hyundai Motors India Limited. I understood how the techniques of IE can impact the efficiency of the company. By using techniques like “MOST” and other optimization techniques, the company was able to decrease its cycle time significantly. Eventually, it improved the line efficiency from 84 to 89% and also improved the production rate of engines (220 to 242). As an intern at BHEL (Bharat Heavy Electricals Limited) and BDL (Bharat Dynamics Limited), I worked with the assembly of steam turbines and designed a drill jig for pylon of “Anti-Tank Guiding Missile” respectively. This experience drove me to take industrial engineering and operations research for my Masters.

My relentless curiosity for knowledge motivated me to apply my learning, and attend various workshops and symposiums and have presented papers at various forums. I have authored an international journal publication on “Performance Characteristics of Neem bio diesel” which focused on improving efficiency. I have also completed a project and made a working model of “Non-electric domestic adsorption refrigeration”. Thus, I decided to pursue my Master’s degree in the United States for technological know-how, the excellent facilities for research work, and a multi-ethnic environment.

The University of Massachusetts is consistently ranked among the top Universities in the US and is one of the best Universities for industrial engineering and operations research. I am confident that the high level of research being conducted in wide range of fields in this subject would give me an opportunity to get an overall understanding of how each area affects an organization. The research work done by Sundar Krishnamurty in design optimization and by Ana Mauriel in logistics and supply chain management is of great interest to me. The abundant research resources, state-of-the-art facilities, experienced faculty and diversified peer group are the reasons for my applying for admission to UMass.

I aver that I have the necessary commitment; intelligence and stamina to look forward to do it all. I look forward to have a long and profitable association with your esteemed college.