

MENSA Essay 2020 Scholarship
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Upon graduating from college, I plan to work as a process engineer. Process engineers focus on taking small-scale processes and scaling them up to industrial levels. This interests me because it spans across all industries from food production to pharmaceuticals to consumer products. Additionally, it allows me to help companies save time, money and materials.

During my sophomore year of college, I partnered with LabCorp, a medical diagnostic company, to solve multiple process failures within the Infectious Disease Department. The diagnostic test frequency was increasing but their testing methods were not efficient enough to handle the change. After pinpointing areas in their process that were the most time consuming, I conceptualized, designed, and manufactured a 3-D printed device to solve their major problems.

I used the Lean Six Sigma methodology to ensure the device would remain accurate throughout the hundreds of tests lab technicians ran each week. My device operated at 4.85 sigmas, meaning when 1 million tests are completed, there will be 369 defects. That amounts to a 0.037% error rate. In addition to being accurate, this product reduced testing duration by over 5 minutes per test. My product saved laboratory technicians over 15 hours per week thus reducing test duration dramatically. This project resulted in more accurate and efficient tests on a large scale and inspired me to pursue process engineering.

As that project concluded during my sophomore year, I began looking for other opportunities to gain professional experience. Then, Johnson & Johnson offered me a Co-Op position as a Supply Chain Engineer. Supply chain engineering and process engineering are similar because both fields focus on improving large-scale process efficiency. I jumped at this opportunity to strengthen my skill set. I became a Deliver Global Strategy and Deployment Analyst.

For six months I worked to pinpoint areas of the business that needed the most improvement. My team measured if products arrived on time, in full, undamaged to all customers. I gathered data points globally and analyzed them to reveal trends in the data. What I saw was astounding, countries were not communicating with one another. Practices that North America followed were completely different from those followed in Asia. This meant that it was impossible to analyze metric performance because every team measured and reported data differently.

To solve our issues with connectivity I used Lean Six Sigma methodology. I developed Standard Operating Procedures (SOPs) that outlined how to properly collect and report data. Once data was collected, I used different analytic software to sort through data and visualize it. These visuals were then presented to the World Wide Vice President (WWVP) for Deliver. Because of my work, the WWVP made process changes globally. One small process improvement in Latin America alone saved \$300,000 annually. Data I analyzed strengthened processes globally and helped customers receive the life-saving products they needed.

This upcoming summer, I will be interning at Phillips 66 as a Process Engineer. This experience directly corresponds to my career goals and gives me a new industry perspective. I know I have a passion for process engineering, so my new focus is finding what industry interests me the most. Whatever the future holds, I know process engineering will play a major role in it.