**Everyone belongs to many different communities and/or groups defined by (among other things) shared geography, religion, ethnicity, income, cuisine, interest, race, ideology, or intellectual heritage. Choose one of the communities to which you belong, and describe that community and your place within it. (300 WORDS)**

For 3 years, I have been a member of a community called Canitutor, where we help fellow classmates who struggle in academic subjects through private tutoring.

As a math tutor, I found that my tutees had difficulties understanding our teacher’s explanation. I reflected on my personal learning style and recalled the creative methods I used to understand difficult concepts. So, I tried to do the same with my tutees.

When explaining the concept of probability, I showed its relevant real-life application, such as calculating the chance of arriving to school on-time in Jakarta’s unpredictable traffic. To show this, I made short, simple videos using different props such as cards, coins, dice, and coloured beads. Such applications triggered my tutees' interests, they could relate to the concepts and their relevance to daily lives, resulting in sustained engagement.

I also used game terminologies that my tutees were familiar with. For example, I used the popular racing game Gran Turismo to explain the concept of integral to velocity. One of my tutees was able to relate to the explanation and even joked that he managed to solve the "Gran Turismo" problem on his exam. These methods helped my tutees improve their analytical and problem-solving skills, resulting in an improvement of a whole letter grade on average in their test scores.

For the past 3 years, the Canitutor community has allowed me to inspire and support my fellow tutors and tutees through creative problem-solving and innovative teaching methods. At Michigan, I hope to inspire others to think outside the box and find new exciting ways to solve problems as well.

**Describe the unique qualities that attract you to the specific undergraduate College or School (including preferred admission and dual degree programs) to which you are applying at the University of Michigan. How would that curriculum support your interests? (550 WORDS)**

Ever since I was little, I have always thought that efficiency is key to succeeding, turning it into my life’s main focus. I soon discovered that industrial engineering deals with optimizing the productivity of a process or system.

My interest in industrial engineering started with my visit to my father’s warehouse. He runs a tire manufacturing company for Mitsubishi where I observed their assembly process and its efficiency. I noticed bottlenecks in some manual processes and idle stations that resulted in frequent late deliveries. So, during my internship at Mitsubishi Corporation, I suggested to create automation of product labeling to make order placing more accurate and minimizes manual checking work. Though it was a short experience, I managed to identify bottlenecks, analyze processes, experiment with creative approaches, and implement a viable solution.

Inspired by how the iterative process directly contributes to operational improvement, I aspire to pursue industrial engineering with a focus on Operation Research, which I believe to be the heart of any production system.

I’m excited to learn from theories and applications relevant to the transport industry and extrapolate operation models that are applicable to the Indonesian landscape. The combination of IOE 440 - Operations Analysis and Modeling and IOE 551 - Productivity Analysis and Performance Measurement will allow me to critically analyze an issue and make a measurement of a carefully designed solution to predict its effectiveness before the actual implementation, from which I can draw insights to help me optimize and form ideas for a logistic operation model.

I’d like to work with Professor Romesh Saigal, whose expertise in both engineering and business fields are invaluable to my goals.

Alongside my major in industrial engineering, I am interested in taking a minor in computer science. I’m excited to leverage deep technologies in AI and machine learning to improve accuracy when addressing challenging problems in mobility, energy systems, and system resilience.

Lastly, by joining the Human Factor and Ergonomics Society (HFES), I will not only develop my problem-solving skills through being directly engaged with professionals, but also gain exposure to different understandings and knowledge on creating human-centered designs. I aspire to bring a more user-friendly approach to my engineering projects and designs, creating solutions that are more empathetic to real life practice. For example, when tackling an optimization problem, instead of creating a theoretically perfect solution, I would be able to take into account the various factors that affect workers, such as workload, workplace design, and social environment. This extra step in creating a solution will naturally yield a more efficient result in the actual implementation.

Ultimately, I strongly believe that UMich's approach of ‘reimagining what engineering can be by closing critical gaps and elevating all people’ aligns with my goal of becoming a future engineer with a visionary mindset, pushing boundaries, and creatively innovating to improve efficiency and effectiveness in industries.

Furthermore, I wish to join the Wisconsin Engineering Student Council where I will be able to develop my leadership and problem-solving skills by hosting various events and activities. I am particularly interested in hosting the professional skills week where I get to meet and possibly invite professionals in the engineering field. I particularly hope to invite Tim Cook, the CEO of Apple to the professional skills week. I believe Wisconsin-Madison’s engineering society will learn a lot through his experience and knowledge in supply chain efficiency.