1. 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? Max 550

As Tesla noticed the problem of transmitting direct current over long distances, he invented alternating current, which allowed for the development of the modern power grid. Inspired, I began finding solutions to problems I noticed, such as building an automatic-door-handle-sanitizer to minimize viral transmissions and building solar-powered street lights to provide light to people at the remote Kei Island in East Indonesia.

In the future, I aim to use my passion in engineering to tackle humanity’s greatest challenge - climate change. The power and transportation industry are major contributors to carbon emissions, and thus, it is crucial to tackle climate change by decreasing reliance on fossil fuels and transitioning to cleaner energy sources. Furthermore, promoting the use of electric vehicles powered by this clean energy can have a significant impact. I believe that majoring in Electrical Engineering would equip me with the necessary skills to bring these missions to fruition.

To achieve this, I not only need to have a deep knowledge in engineering, but also a solid business acumen to expand my inventions to scalable projects - and UMich is my springboard to achieve that! As UMich has extensive research on improving efficiency of photovoltaic technology and research on more sustainable transportation systems, such as electric vehicles, UMich’s mission to serve the common good aligns with my mission.

UMich's Electrical Engineering curriculum provides me with each step towards my career goal of building infrastructure to shift the world from reliance on fossil fuels to a greener world powered by clean energy. I can’t wait to take *Grid Integration of Renewable Energy Sources* to learn about the integration of renewable generation in electricity grids. This way, I hope to integrate greener energy sources into our electric grids, reducing carbon emissions in the energy sector. In addition, I hope to learn more about battery technologies from the course *Battery Systems and Control* in order to learn how to build next-level batteries that could increase the range of electric vehicles, which could help in the mass adoption of these vehicles.

At the UMich, I aspire to collaborate with Professor Stephen Forrest on his innovative project of transparent solar cells. I firmly believe that these cells hold massive potential and could be integrated into windows, particularly in tall buildings, thereby expanding the utilization of solar energy. Currently, Professor Forrest and his team have achieved an efficiency rate of 8%. My objective is to contribute to the improvement of these solar cells' efficiency as part of my mission to combat climate change.

Additionally, through UMich’s Center for Entrepreneurship (CFE), I wish to be mentored by the legendary Nicholas Cucinelli, CEO of Endectra, to gain a deeper understanding of the business aspects of my projects, from assessing my project’s feasibility to developing sustainability strategies. Through the knowledge and skills I will acquire through the CFE, I will be able to evolve my mere inventions into a scalable business that has a larger impact.

In conclusion, the College of Engineering at the University of Michigan is the perfect place for me to pursue my passion for engineering and contribute to the fight against climate change. I am confident that the education and experiences at UMich will help me achieve my aspirations to make a positive impact on the world.