**Most students choose their intended major or area of study based on a passion or inspiration that’s developed over time – what passion or inspiration led you to choose this area of study? (300 words)**

Heat waves and warmer oceans are tell-tale signs of global warming. This is one of the reasons for the increasing floods in Indonesia and other tropical countries. High rates of CO2 emissions made me realize the imminent threat of global warming and ignited my yearning to solve global warming using sustainable energy. It would lead to a cleaner future where the condition of the planet changes for the better and resources can still be utilized safely. However, its relative inefficiency at the moment means that there is still work to do to develop more viable alternatives.

I explored improving sustainable energy technologies with the hopes of making its mass adoption a reality. During my research on energy efficiency, I was introduced to thermodynamics' Carnot Cycle and energy storage systems. The possibility of achieving an ideal energy conversion and being able to store it excites me: it means the global usage of sustainable energy is possible.

Whilst looking into new methods of sourcing renewable energy, I discovered tidal turbines. With Indonesia being home to 13,000 islands, there is huge potential to use tidal turbines as an alternative energy source in the remote islands of Indonesia. This would contribute to reducing Indonesia’s pollution level. Although there are some turbines currently functioning, they provide small amounts of energy because their fluid mechanics are still in the early stages. Understanding fluid dynamics could lead to new designs for harnessing more kinetic energy, therefore, generating more electricity. This requires a good understanding of what occurs underwater and designing skills to modify the blueprints. To be able to do this, majoring in Mechanical Engineering is the optimal choice. Pursuing Mechanical Engineering at CMU would enable me to be at the forefront of designing and developing efficient high energy density sustainable energy technologies.

Hi Abian,

I truly admire your passion for sustainable energy. There might not be as many young people who have thought about energy use long term, so this is definitely a quality of yours that stands out to the admissions committee.

However, I feel that the structure of your essay can be greatly improved to further highlight this passion of yours. Remember, this prompt is about "why do you want to major in mechanical engineering? How have you pursued this area of interest? Why CMU?"

The most important execution for this prompt is to elaborate on your journey that led you to choose this major. I’d advise using an anecdote because it is unique to you, and by giving the essay a narrative arc, you can also demonstrate your intellectual curiosity and your passion for pursuing this major at the university level.

Here’s my suggestion for the narrative arc that you can follow:

1. You’ve talked about the effect of global warming in your first paragraph. To make it into an anecdote or a hook to lay down the foundation of your journey, you can talk about the devastating effects of floods in Indonesia instead. You can begin your story with your reaction after reading some news or seeing something on Instagram or YouTube about the victims of heavy flooding. You can then elaborate that you’ve read these news stories since you were small, but they're becoming more frequent and have deadly effects.
2. Your concern for your fellow Indonesians led you to look into ways to slow global warming, which is how you first learned about sustainable engineering. You can discuss what you’ve done or learned about this topic in this middle part of the story. **Shorten the part about the Carnot cycle and talk about your internship at the water processing plant.** What did you learn there about sustainable energy systems? This is your transition into the next paragraph on tidal turbines.
3. The last anecdote should show growth and academic pursuit. If you want to talk about tidal turbines, what is something that you’ve done related to it? Have you mocked up digital models? Maybe done research on existing models and how they work?
4. Mention explicitly or implicitly how CMU would help you pursue mechanical engineering. Why is this campus special to you? Are there professional opportunities available for students? A club or faculty member?

 A chronological order would illustrate how you progressed from someone with no initial knowledge of sustainable engineering to someone who’s highly devoted to this field. Better yet, it also shows your compassion for helping society and the earth!