**2. The student body at the USC Viterbi School of Engineering is a diverse group of unique engineers and computer scientists who work together to engineer a better world for all humanity. Describe how your contributions to the USC Viterbi student body may be distinct from others. Please feel free to touch on any part of your background, traits, skills, experiences, challenges, and/or personality in helping us better understand you. (250 words)**

With online teaching and zoom these past 2 years during COVID-19, I noticed my peers struggling to understand, especially in math. As I was well known as the “conqueror of math” among my friends, a few classmates started asking me to tutor them, and gradually, I found my hidden passion in teaching.

In my spare time, I would crack my mind in search of creative ways to simplify the difficult concepts. I started by making short videos, using analogies and simple props such as marbles to emphasize the foundation of the concepts so that they have a full understanding of the essence, knowing when and how to apply them. On top of this, to help them memorize the different formulas, I implemented game terminologies that they are familiar with to help them memorize. Gradually, these methods helped my tutees to better analyze and solve problems, gaining improvements in scores by about 5-10 points.

Through teaching, I realized that people have different perceptions of a problem. It may be easy for some, but hard for others. I learned that we cannot presume a single solution that will work for everyone, but instead understand the different individuals’ circumstances and use creativity to help them better understand what they are facing. I believe that in USC, I can continue using my creative problem-solving thinking and heart to help others not only in the math field, but also in my daily conversation and interaction with others by understanding first the individual or group’s condition.

**3. The National Academy of Engineering (NAE) and their 14 Grand Challenges go hand-in-hand with our vision to engineer a better world for all humanity. Engineers and computer scientists are challenged to solve these problems in order to improve life on the planet. Learn more about the NAE Grand Challenges at** [**http://engineeringchallenges.org**](http://engineeringchallenges.org/) **and tell us which challenge is most important to you, and why. (250 words)**

One of the most essential resources for humans to exist is clean water. According to the World Health Organization (WHO), despite sophisticated technology developments, more than 770 million people still do not have access to clean water. I take a special interest in this grand challenge, namely because the majority of the population in my country, Indonesia, suffer from this issue.

During my visit to Kei island, a small remote island in Indonesia, I witnessed how critical this issue is. While I was assisting a small clinic there, I observed a lot of younger children suffering from simple diarrhea to serious cholera disease, which from my conversation with the locals there was mostly caused by the scarcity of clean water on the island. Not only that, I also learned from the local doctors that if this issue persists, the children could also suffer from malnutrition, hindering the potential of their physical and mental growth.

Thus, the lack of clean water is crucial to tackle for the future of the next generation. A hindrance in the growth of new generations might eventually carry implications across the different fields, from adding to learning difficulties, to impeding the labor force growth, affecting the economy. While other grand challenges are about improving the quality of life, availability of clean water is a necessity and foundation of life itself that everyone should have access to. Therefore, I believe that the clean water challenge is the most important.