***Describe the world you come from; for example, your family, school, community, city, or town. How has that world shaped your dreams and aspirations?\* 250 words or fewer***

My dream is to build a team that makes electric vehicles (EV) in Indonesia. It all started when my dad brought me to Engine+, an auto repair shop, where I was able to tweak used engines to my heart’s content. Despite the shop being filled with intimidating-looking mechanics, they were actually very friendly. They would make jokes with me to make me feel welcomed, teach me the basics of engines, and show me how engines' components work. Because of this, I frequently visited Engine+ until now.

Every year, the mechanics would develop a race car for an annual race event. Teamwork from 6 different divisions play a crucial role. With our limited budget, we maximized how we can develop a winning race car. Most of the parts are bespoke and require frequent communication between divisions.

“The chassis wasn’t stiff enough, and the engine had the wrong air-to-fuel ratio”

“Let’s fix and run it again”

We encountered many obstacles in the process of developing the racecar, and new things are learned everyday. Every time a component is revised and fixed, other components from different divisions has to be re-tune again. I really like their enthusiastic atmosphere.

My world with these mechanics has shaped me to value thinking process and teamwork. Just like a car that needs every part to work together, a team needs every member to work together in order to move forward. Because of them, I’m inspired to become an engineer and have a team to build electric vehicles.

### *Tell us more about why this field of study at MIT appeals to you.\* 100 words or fewer*

Electric Vehicles (EVs) have always been my passion since my father introduced me to car-tuning. I want to continue this passion at MIT, and MIT’s Prof. James L.Kirtley’s research on designing axial flux induction motors for electric vehicles appeals to me because the opportunity to participate in his research would enable me to understand the effects of reduced back iron in EV motors on improving efficiency. This led me to want to major in MIT EE because it would provide me opportunities to develop leading high-tech EVs.

### *We know you lead a busy life, full of activities, many of which are required of you. Tell us about something you do for the pleasure of it.\* (200-250 words)*

Friendship is what I cherish the most, and strengthening this bond with my friends is important. Making WhatsApp stickers was and has always been a big part that keeps our friendship strong. There are numerous memories that we experienced and captured in WhatsApp stickers. It started from a 2019 school trip where I and my friends kept ourselves entertained in the bus by showing each other our WhatsApp sticker collections. During the days we were on that trip, I secretly took silly pictures of my friends and turned them into WhatsApp stickers. I then made each of my friends a designated sticker pack of their silly faces and actions. Time passed by and none of my friends knew anything about these stickers becauseI was waiting for the right moment to pull them out.

It was during our finals week that I decided to show it to them to relieve their stress and tensions. Seeing their laughter made me happy. Since then, I kept creating WhatsApp stickers during my free time for me to relieve stress and helped me gain inspiration when I’m overloaded with school work. Starting from just a hobby, this has now evolved into a love language of mine.

### *At MIT, we bring people together to better the lives of others. MIT students work to improve their communities in different ways, from tackling the world's biggest challenges to being a good friend. Describe one way in which you have contributed to your  community, whether in your family, the classroom, your neighborhood, etc. (200–250 words).*

My definition of toys was different from other kids. Home appliances like mixers and computers were my toys. I would also read their manual books and learn the components in it. The more I learned about these components, the more they fascinated me, so I made more efforts to not just learn, but also fix them. As I improved my “fix rate,” I felt accomplished when mom and her friends asked me to fix their appliances.

Growing confident, I challenged myself to “build” instead of “fix.” So, I started building a pedal-powered bicycle generator, which was motivated by the recurring blackouts in my area during the pandemic. While it was a good idea, building something is different from fixing. I needed to find the appropriate parts that suit my desired specs, which requires multiple contacts with many parts suppliers. Moreover, I had to perform many iterations to build a working prototype.

Upon a tiring and, eventually, successful assembly, I immediately arranged workshop sessions to help them build their own bicycle generator: the kids (and even adults) could store electricity and stay fit during the lockdown. It’s a win-win! Now, a year later, I still see my neighbors using the pedal-powered bicycle generator on their patios. This makes me happy because my design was useful to my community, which confirms my  educational journey to pursue Electrical Engineering.

### *Tell us about a significant challenge you've faced or something that didn't go according to plan that you feel comfortable sharing. How did you manage the situation?\* (200-250 words).*

Mathematics is my life just like mango is my favorite fruit

There was no math club at school. So, five of my friends and I founded our school's first academic club: the Mathlete club. Attracting new members, however, was challenging. Students would flee after hearing “math,” thinking it was demanding, stressful, and lame.

I noticed many students in school were struggling with math. I saw this as a chance to grow the club. Thus, to gain their attention, I set up a weekly MANGO (MAth-biNGO) in the school’s cafeteria. Here, everyone can play and the first five winners would receive free tutoring sessions. I made sure to make math less frightening by offering a safe environment for students to open up about their math struggles, which usually affected their physical and mental well-being: I would arrange biweekly potluck events to relieve their stress and bond with them.

When word spread of our free foods, surprise math-quizzes for delicious mango snacks, and fun math demonstrations, more people began to want to try out the club. Fun equals happiness, which equals motivation to learn math. As a result, our members’ grades improved and this attracted more members. The cycle continued.

Now, four years later, the Mathlete club has 81 members. I never would have imagined that our Mathlete club would grow this big. From the member growth equals to zero to 200% growth per year, our perseverance and genuineness to help our peers with math paid off in expanding our club.