***Engineering is inherently collaborative. What does collaboration mean to you? What strengths do you bring to the collaborative process? (200 words)***

After many failed designs and iterations, we were finally able to create a product that reduced water usage by 30%. Challenged by Dettol Arabia in the DIDI Competition, our product featured 2 rods protruding out of a wide body featuring a LCD screen to display correct handwashing techniques to users. Inspired by a YouTube video I had seen of *Alex the French Guy Cooking* creating a DIY croissant-dough-roller-machine, I pitched the idea to the team, and while doubts arose at first, we quickly distributed our tasks to work efficiently.

Suleiman, the group leader, worked on the main body’s prototype, connecting each part of the product together like he connected each team member’s tasks. Rashika, being visually talented, designed the animations for the product’s LCD screen. Keshini and Emmanuel were like the solar panels of the product. They gave energy to the team while soldering the hardware. However, knowing they weren’t as skilled in coding the Arduino, I stepped in to work on the software.

While my creativity initially stimulated the creation of the product, each one of us acted as a piece in the final product. To me that’s what collaboration is: distributing expertise according to each other's strengths and taking initiatives to compensate for each other's weakness.

***For you, what makes Cornell Engineering special? Why do you want to attend Cornell Engineering? (200 words)***

My drive to find a feasible form of renewable penetration to the grid led me to investigate the benefits of ‘smart grid’ technology on the efficiency and sustainability of the power grid for my school research paper. Wallowed into research on technology to enhance renewable penetration in the grid, I stumbled upon Cornell’s Dr. Eilan Bitar’s research on the control of distributed energy resources, where I was fascinated by his findings on the potential of integrating smart meters and high energy-density supercapacitors into our current fossil-fuel powered electrical grids, sparking curiosity in implementing such technologies in my home, Indonesia. Inspired by Dr. Bitar’s research, I hope to carry out undergraduate research at Cornell on smart systems. Cornell’s abundance of undergraduate research in the realm of smart systems proves our shared desire to optimize energy systems through smart innovations.To further explore this concept, I look forward to taking the *Intro to Internet of Things- Tech and Engagement* class, where I hope to delve deeper into the mechanism behind device-to-device communication. This will give me a better understanding on the feasibility of implementing a bidirectional electrical flow in the grid as part of the smart grid. Ultimately, I am eager to join Cornell’s drive to shift to a less fossil-fuel reliant grid.