***Why do you want to study your chosen major specifically at Georgia Tech? (300 words)***

The once vibrant orange donkey pump was rusty and stagnant, and the once flourishing ‘petroleum residential camp’ it stood in became a dreary, empty set of houses, no longer resembling a neighborhood. After the oil price plunge in 2016, I revisited my childhood home, Brunei, and witnessed how the downfall of petroleum could impact a country's social setting. At this point, I knew that it was time for the rise of a new form of energy: sustainable energy.  Pursuing electrical engineering at Georgia Tech (GT) would enable me to be at the forefront of our fossil-fuel-driven world’s transformation to a more sustainable energy reliance.

My drive to find a feasible form of renewable penetration to the grid led me to research the benefits of smart grid technology on the sustainability of the power grid, which I hope to continue pursuing at GT. In the process, I appreciated Dr Baratunde Cola’s research on developing an optical rectenna which, I believe, could have a significant impact on heat flow in the energy sector and, thus, be important for sustainability use. I hope to work with Dr Cola to further explore how nanoengineering can potentially be used in the grid at GTech’s unique NEST Lab.

I am also excited to take the global engineering leadership program, particularly the *Smart and Susta*inable *Cities* course. I hope to explore the constraints of implementing the smart grid in the context of city infrastructure through part II of the course. Studying at the urban giant of Atlanta, would undoubtedly enable me conceptualise these ideas to potentially align with Atlanta’s ambitious plan to use 100% green energy by 2035, a remarkable thing to be a part of.