Alexander Tekle
Digicert Scholarship

Write a 400-600 word essay about how the Internet of Things will affect your future.

In the summer of 2016, I interned with Ericsson at their Plano, Texas campus that employs over 5,000 ingenious and creative minds. Since this was my second summer interning at the company, I was used to the disbelief displayed by many of my coworkers when I shared with them that I was a high school student. Despite my young age, I capitalized on the immense STEM opportunities that were available to me at an innovative company like Ericsson. Although I've had a deep appreciation for STEM long prior to that summer, my eight-week intern experience with Ericsson truly solidified my profound passion and love for the field of engineering by introducing me to the ever-growing landscape of the 'Internet of Things'.

I was exposed to the Internet of Things through the North American Intern Showcase, a competition where all Ericsson interns in North America are divided into teams to build a product using Ericsson-based principles that can improve society. We decided to create a robot named EcoFriend that can compile data by engaging with its environmental landscape and output that information to the rest of the world. Despite being the youngest member on my team, I took the programming lead by using my roots in Java to code EcoFriend's actions and functionality.

At the onset, I was overwhelmed by the complexity of my responsibilities - I was going to venture into the IoT discipline with no prior experience or knowledge. However, by attending Ericsson robotics seminars, I gained invaluable knowledge regarding sensors, actuators, and smart grids that assisted me in programming EcoFriend's functionality and interconnectivity. After a few weeks of rigorous development work, I successfully programmed EcoFriend's Arduino microcontrollers to detect soil and climate data including humidity, temperature, and wind speed. With counseling and instruction from top Ericsson IoT innovation officers and engineers, our team successfully synchronized EcoFriend with cloud-computing technology to access its stored data all across the world with elaborate tables, charts, and graphs.

We successfully designed and built EcoFriend, overcoming several hurdles throughout the process. After presenting our project to Ericsson executives, our efforts were vindicated: we won first place in the international competition for our innovative use of Ericsson's Internet of Things. This enriching experience reaffirmed my belief that technology possesses a bottomless reservoir of problem-solving potential in our world.

I have tried my best to immerse myself in the STEM world in multiple capacities: competing in several hackathons, serving as president of my high school's computer club, building a robot for the FIRST Robotics Competition, and providing disadvantaged students Raspberry Pi computers through my nonprofit Hack4Progress. STEM has always captivated my spirit of inquiry due to its ability to construct grand solutions to our societal problems. Successfully designing and building EcoFriend despite our minimal knowledge of IoT principles and concepts etched in me a desire to further expand my understanding of the discipline by pursuing a professional degree in Electrical Engineering and Computer Science.

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Moore’s Law states the rate of change of technology is increasing exponentially every day. Accordingly, the Internet of Things is the present and future of technology as greater importance is placed on the rapid and transparent exchange of information and data. I plan to be apart of that future as a prospective IoT innovator and collaborator to help build a more interconnected world.