Statement of Purpose

Md Tariqul Islam

Back in 2006, when I was 12 years old, I had a personal laptop for academic activities and recreation, and learned to set up the operating system, write in Microsoft Office, edit photos using Adobe Photoshop emailing, internet browsing, etc. within two years. I was also curious to know about what that device contained. I used to open it up and learn about tools like CD Room, RAM, HDD, battery etc. However, we had a wireless telephone set, a few months later this device was damaged by thunder strike. I was curious to find out how this device was damaged and hence started to look for answers on top of that, electronic home appliances, such as Radio, Tape Recorder, Television, VCR, DVD, CD player, Mobiles Phone etc. Always made me curious about their working principles. I curiosity increased over the year including ***setting up a satellite antenna in our local area when I was 17 years old***. My passion for electronics led me to study electrical and electronic engineering in undergrad, where I got the privilege of with the satellite communication and installing receiving the TV channel over the Radio wave from an orbiting satellite. I was targeting the orbital position Apstar 7 at 76.5°E and AsiaSat 5 at 100.5°E, and other geo-stations, and I had set up the LNB C, Ku-Band. Technical specifications of the C- Band LNB. This is a high gain point-to-point parabolic reflecting dipole antenna, receiving and radiating signal only in one direction along with the spherical wave. The operating frequency range of the half-wave dipole antennas lies between 3 kHz to 300 GHz. I have used this antenna for detecting television channel signals. To explore on my childhood passion, I had set up a laboratory in own house, which I used to repair electrical appliances. Initially, I did not have any formal training and my passion helped me to self-learn some of the basics to understand their mechanism, allowing me to get hands-on experience outside of academic activities in my university.

My passion only grew and grew and I started to realize my knack for research in the broad scope of electronics. My intense desire to become an engineer made me admit into a **Polytechnic Institute** and achieved a certificate in applied science (Four Years Diploma in Electrical Engineering). Thereafter, I took admission at the ***Daffodil International University*** and recently finished my undergraduate program in Electrical and Electronics Engineering in September 21th, 2021 and the content helped me fuel my inner sense of creativity. I chose to work with the effects of thunder strike on wireless communication devices. Moreover, I have done freelancing to support myself and my endeavors financially. My keen interest in learning new concepts, combined with my inner need to achieve a level of excellence in every bit of work I perform, enabled me to amass vital information on varied aspects of nature and technology, leading me through a prosperous academic career. During my under-graduation, I was involved in various other activities ranging from the presentation of technical papers to participating in Techno Events. My undergraduate thesis was "***Design and Hardware Implementation of Electric Bike with Smart Features and Automatic Security Lock***". This project was funded by "***North Bengal Cycle Industries Ltd***", renowned multinational company in our country. This project required multidisciplinary knowledge from Electrical, Telecommunication, and Mechanical engineering, In the project, the information for longitude and latitude was displayed on the LCD while I used GSM and GPRS modules to answer phone calls using a headset and electric Microphone to send and receive SMS GPRS data. I also gave an oral presentation in this paper at an international conference at Taylor University, Malaysia. Another project of interest was "***Structure of Soil Moisture Sensing Electronic Irrigation System***". The objective of the project was to explore human-substitution in irrigation framing systems. I used the FC-28 soil moisture sensor with an Arduino. This detector measures the meter content of water within the soil and measures the moisture level. The sensor gives us both analog and digital output and this data send the Arduino box then the water pump turns ON/OFF. This data user can be seen on own the website. Some other projects I have ventured are ***"Leaser Security Locker" And "Electrical DC Motor Design and Build".*** Those experiences were invaluable tome to learn the functionalists of various real-world applications. Also, I try to follow the recent

technological innovations in my field of interest through technical periodicals and attending varied seminars & conferences. Also, to amass data on this widespread technology, I familiarized myself with them through certification courses such as PhD.

In my future endeavor, I want to study in the wireless communication, Machine learning, image processing, natural language processing, Artificial Intelligence, Robotics, deep learning, Data management, data science, and cloud computing are the prime areas of my interest. I have chosen field of study but also nurtured for its full growth and continuous development due to which I want to specialize in AI by pursuing a master's program in Electrical and Electronic Engineering at your University to put my imagination to work. It is offers me the opportunity to gain knowledge and skills to become an Electrical and Electronic engineering professional from your lab. After completing graduate study, **I plan to build an astronomy research center in my home country Bangladesh to purse,** because of there have no any active astronomy research center. I have chosen to pursue graduate studies at **Your University** because by working under the guidance of distinguished researchers at your institution, I am confident of making fruitful contribution in the field of Electrical and Computer Engineering. My research interest has burgeoned during my undergraduate studies at **Daffodil International University**. I believe that I possess the motivation, intellectual ability, and preparation to set out on this exhilarating and arduous path and to make significant original contributions to your ongoing research work.

In addition, I participated in an international program "Global Entrepreneurship Summer Camp Program 2019" and my position was 2nd in 60 students at USIM in Malaysia. In 2015, I did a three months' internship at Bangladesh Power Development Board (BPDB), the largest power generation and regulation entity in the country. I have been a member of the DIU Robotics club for the past three years wherein workshops/seminars, events, festivals, and functions exposed me to a lot of emerging technologies, and members of the American Center, Bangladesh, an associate member of the Institution of Diploma Engineers Bangladesh (IDEB) also, an associate member of **IEEE**. My managerial and interpersonal skills developed me as one of the organizers of the DIU Robotics club "Quest for Intellectuals". Last two years I have learned some programming languages such as Python, Java, HTML & CSS etc. to bolster my coding skills and help me solve real-world problem through simulation.

To achieve my cherished objective of obtaining a position of leadership in my field of study/work, I feel that Graduate Study at **Your University** with its high quality of intellectual and material resources would give me the opportunity and environment to realize my academic and professional goals. I conclude with great expectations of being given a chance to pursue higher studies at **Your University**. Providing me with adequate financial aid would greatly facilitate my pursuit of a graduate degree.

I thank you for giving me this opportunity to express myself.

Declaration: - I hereby affirm that all the above information and statements made by me are correct and true. I understand that any inaccuracy or false information will render my application invalid.

Md Tariqul Islam