

## **Statement of Research Interest**

I am writing to articulate my interest in applying for the M. Tech in Electronics and Electrical Communication Engineering at the Indian Institute of Technology Kharagpur. This program is a solid footstep to my future career as an Electronics engineer who appreciates and values STEM.

Growing interest and a natural affinity for science led me to choose Electrical Engineering as a major at the University of Malaya from where I graduated with a distinction honors degree (96%). During my school years, I received two government scholarships as an acknowledgment one of the nation's top elite students. In 2013, I was ranked 2nd and 5th in the regional quiz contest and science olympiad respectively.

Like in school, I was active both in and out of the class in the college. I was among the top 5 graduates in the class. In college, I gained the dean's award for 6 times and won UM's best business model and prototype award for designing and developing a smart bin. In my second year, I had been chosen from 200 applicants to engage in the Common Purpose leadership summit to study how businesses ensure that the city remains inclusive. Besides, I had won hackathons like the Park of the future hackathon which aimed to develop ideas on operational improvement at Singapore Science Park. In 2019, I won the "Hult Prize on Campus Round" along with three of my friends and represented the University of Malaya at the KL regional Hult Prize where our solutions targeted unemployed young community by offering them the possibility of using an empty roof to develop superfoods like microgreen. Later in the same year, I joined a 12-week acceleration program sponsored by Selangor Youth Community, PurpoSE Malaysia, and Sunway iLabs to address real-world social issues through impact-driven ventures. Lately, I became a certified Huawei Big Data engineer and Google IT Support expert.

As I continued my program, I discovered a passion for original research. My first research experience was as a summer research assistant at UM Motorola Solution Lab where I assisted on mobile applications to forecast the weather using IoT. As part of my senior research thesis, I researched on the characterization of the flexible and printable electrodes used for wearable supercapacitors.

In my third year of engineering, I interned at Huber+Suhner, where I helped to improve the assembly line and analyze manufacturing flaws. I am currently affiliated with Teach for Bangladesh whose mission is to promote excellent education that empowers poor children to reach their full potential. This mentoring opportunity is one of my proudest achievements.

I opted IIT Kharagpur for two major reasons. First, IIT Kharagpur reflects its strong commitment to high-quality education, well-respected faculty, and well-equipped research labs. Second, Kharagpur is a livable and friendly city with a vibrant international spirit and sincere hospitality, allowing students to gain experience and join in extracurricular activities.

Research is the perfect match for my career goals, and I will apply for a Ph.D. after completing this degree. For my doctorate, I plan to enroll in a research center focusing on Autonomous System and work on the planning and testing of a variety of smart, automated, electric, mobility networks. Several courses such as embedded systems, and image processing will give me a strong footing in Ph.D.'s theoretical concept. To sum up, I have the skill and the ambitions, and this opportunity at this stage would give me the necessary momentum that would accelerate my aspired career.