PERSONAL HISTORY

Mahedi Kamal *Ph.D. Applicant*

My initial schooling was full of transitions, reflecting the absence of a structured plan for my academic future on my parent's part. Although I was admitted initially to an Arabic-medium school, I was transferred to an English-medium school after three years. The course curriculum of my new school had no overlap with the previous one. It was a totally new world to me: I had to start from scratch while competing with the rest of my class. By the time I got accustomed to this new environment, my family was hit with financial difficulties. As English-medium schools are costly in our country, my parents had to shift me once more and this time it was Bangla-medium. So in class five, I found myself struggling again with another new curriculum and trying to adjust. Nevertheless, with my teachers' guidance and my classmates' cooperation, I achieved a top position in my class.

When I was in class nine I faced a serious health issue. I was at school and suddenly fell ill severely. I lost consciousness upon returning home and was quickly admitted to the emergency. Doctors informed my family that my chance of survival was minimal. After 24 hours I regained consciousness, but doctors were skeptical about my complete recovery. After a month of hospitalization, I returned home. However, I was unable to continue my academic education for about a year. Even after I joined classes my health-related issues persisted- I was physically weak and could not concentrate for long times. These hard times have taught me resilience and perseverance. I came out as a winner by acquiring the highest grades nationally, in both secondary and higher secondary levels.

After my BSc, I joined a lab that produces measurement robots for the wafer fabrication industry as a software engineer and solved multiple challenging problems successfully. I encountered a complex challenge that required implementing a feature with intensive X- and Y-axis movements, synchronized with data collection while moving. The system’s behavior became unpredictable, with Y-axis commands sometimes triggering X-axis movements or failing altogether and data is not synchronized with motor movement. After investigating, I discovered that the issue stemmed because the motor firmware was not ready to process so many commands in a short time, we are giving at least 100 move commands in 1 second. Collaborating with my team, we changed the firmware. We gave direction to the electrical team to build a microcontroller to ensure fast response, ultimately achieving reliable and synchronized movement for the new feature. This experience reinforced the value of adaptability and cross-functional alignment in complex system integrations.

I believe my experience, determination, and commitment to inclusive education will allow me to make a special contribution to your program. As someone from a small town in a third-world country, I understand how these communities suffer. My experience of bad times and how I overcame those situations filled me with mental strength. I want to bring my courage to the University at Albany and learn from others. I dream of working with ML, robotics, and computer vision and contributing to the University at Albany’s research lab with other amusing minds.