

Statement of Purpose

The never reached goal of my father, to be a researcher, has been and will be my key motivation in all that I have achieved so far and what I intend to achieve in the future. Such immense motivation, the trait of inquisitiveness, perseverance and a firm desire to discover and contribute in my relevant field makes a research oriented career my best fit. Hence, to achieve my lifelong goal, I have decided to pursue my PhD in computer science in the fields of **Distributed Systems** and **Parallel Computing**. I strongly believe that a PhD degree from such reputed institution like **University of Tennessee** will prove my quality and establish my credibility as a researcher.

I have completed my graduation from **Islamic University of Technology**, one of the best engineering universities in Bangladesh, where top ranked students in a highly competitive admission test get admitted in Computer Science and Information Technology department. During my undergraduate years, I have successfully completed different computer science courses and projects, which helped me to build a strong and broad foundation on different fields of computer science. I secured the top grade in most of the programming and lab-based courses and played the role of group leader in almost all group-based projects. I consider that these achievements reflect my degree of ability to work both in a group and individually. Among the projects completed in my undergraduate tenure, the **Freelance Job Posting** site was the most intricate one. I had to analyze and design the database very carefully for large dataset and had to pay tremendous attention on the user interface design for effective and real application.

My undergraduate thesis was in the field of Network Security titled “**Study of Reputation Based Defense Mechanisms in peer-to-peer Live Video Streaming**”. Our objective was to build a simulator to compare and find the best proposed reputation based defense mechanisms that could most effectively stop malicious peers from polluting live video streaming networks. To fulfill the objective, I read numerous papers on live video streaming technology to choose the most popular one and to select the better proposed reputation based defense mechanisms. This process got me introduced with the necessary amount of reading and selection of state of the art papers, which I believe is the rudimentary step in research. Finally, we successfully built a simulator based on Java and found the best among the better proposed mechanisms. A paper titled “**Study of Reputation Based Defense Mechanisms in Peer to Peer Live Streaming**” based on the thesis has been published in International Journal of Computer Science Issues (**IJCSI**) on volume 8, issue 6. After graduation, we further enhanced the best mechanism by combining a centralized approach and an article based on that was accepted in *Proceedings of the 2012 IEEE International Conference on Information Reuse and Integration*, **IRI 2012**, titled “**A Combined Approach of Reputation Based Defense Mechanism in P2P Live Video Streaming**”.

My thesis along with some excellent courses taken in my senior and junior years like **Computer Networks, Simulation, Modeling and Performance Evaluation, Compilers** etc has made my desire stronger to perform extensive research in **Distributed Systems** and **Parallel Computing**.

I began my professional career as a **programmer** in a software firm named [Excel Company Ltd.](#) There I got acquainted with sophisticated and modern technologies like HTML 5, CSS 3, Javascript, services to mobile platforms like android etc. After working there for 5 months, on May 2012 I got the opportunity to enter the world of academia and joined [Stamford University Bangladesh](#) as a **lecturer** in the department of Computer Science and Engineering. I am teaching courses like mathematical analysis for computer science and visual internet programming, and while teaching these courses I got the chance to look at some core subjects from a totally different perspective. I am also serving as an active member of the departmental course offer and routine committee, which is fascinating and aberrant for a very newly appointed faculty member like me. All these academic and professional experiences I have gathered so far will surely help me to stand out in graduate school.

Apart of these, I also actively participated in extracurricular activities such as organizing national level ICT Festivals, serving as **vice president** of IUT Computer Society and **captain** of Cricket Team of CIT Department in the year 2011. Winning the runners up trophy in Lawn-Tennis double inter-department tournament in 2010 and the runners up trophy in inter-department cricket tournament in 2011 are among numerous others.

While searching for the suitable universities, I have found **University of Tennessee** most promising because of its strong research foundation on different interdisciplinary topics on **Distributed Systems** and **Parallel Computing**. I have particularly found the projects related to **Data Mining, Scientific Computing** most interesting. These projects have motivated me to carry on studies related to these topics. I am aware that admission into **University of Tennessee** is highly competitive, but I would like to think that, I am a suitable match for your program because of my great interest in the works related to your research groups.

In professional life my target is to either become a faculty member in one of the best universities of the world or to be a research scientist in one of the most advanced research institutes of the world. I strongly feel that having the opportunity to pursue graduate studies in your university will allow me to continue my academic performance with excellence as well as acquire knowledge and contribute in the discipline of Computer Science.

Reazul Hoque