

Chowdhury Nafis Faiyaz

Bachelor of Computer Science and Engineering
School of Electrical and Computer Engineering
North South University, Bangladesh

Contact Information:

Email: nafisfaiyaz47@gmail.com
Mobile: +8801715143427
Socials: [!\[\]\(666e09182d4cd268646ea700ea60dcdf_img.jpg\) \(Linked In\)](#), [!\[\]\(1ef1ef0bf9af6c6996401964cf280f2d_img.jpg\) \(Github\)](#), [!\[\]\(e9a80c8557f9285916925bd4ac40fff5_img.jpg\) Portfolio](#)
Address: Bashundhara R/A, Dhaka-1229. Bangladesh
Citizenship: Bangladeshi
Country of residence: Bangladesh

Education:

- **Bachelor of Science in Computer Science and Engineering (BSCSE)**
North South University, Bangladesh — June 2024
Major: Software Engineering and Web Development
Current CGPA: 3.56/4.00 , 89%, (Cum laude Distinction)
Graduated: June 2024
Relevant Coursework: Internet and Web Technology, Software System and Architecture, Software quality assurance and Testing
 - **O'levels & A'levels - Pearson Edexcel IGCSE**
Mastermind English medium School, Bangladesh — July 2017 & June 2019
Major: Physics, Chemistry, Biology, Mathematics
-

Academic Overview:

I completed my Bachelor of Science in Computer Science and Engineering, achieving a CGPA of 3.56/4.00, with a major in Software Engineering. Throughout my academic tenure, I undertook a range of specialized courses, including Software System Architecture, Software Quality Assurance and Testing, Software Engineering, Machine Learning, Internet and Web Technology, and Database Design.

During these courses, I actively participated in numerous team projects, where I played a pivotal role in team management, ensuring successful project outcomes. My capstone design project, "Medease," focused on developing a blockchain-based Electronic Health Record System. This online platform aims to enhance healthcare by securely sharing health records among patients, doctors, and hospitals through blockchain technology with the objective to improve patient care by expediting diagnoses and treatments through better access to comprehensive data.

In addition, I conducted a research project where me and my team developed a machine learning model to investigate the factors influencing risky levels of alcohol consumption among students. This research has been recognized for its contribution to the field and has been selected for publication at the 2024 6th Asia Conference on Machine Learning and Computing (ACMLC 2024).

In addition to my academic endeavors, I have gained practical experience through my role as a Freelance Web Designer and Developer at Pumpkin Plus Agro Innovation Limited since April 2021. In this position, I developed and maintained the company's portfolio website, ensuring optimal performance and a seamless user experience.

Furthermore, in March 2022, I served as a Baseline Survey Analyst at Pumpkin Plus Agro Innovation Limited. I led the design, implementation, and analysis of a survey aimed at gauging the impact of agricultural innovation initiatives. This involved utilizing Microsoft Excel to organize, clean, and analyze the collected survey data, and compiling a comprehensive baseline survey report outlining key findings, trends, and recommendations. I collaborated with stakeholders, including agricultural experts and community leaders, to ensure alignment with project goals.

Research Interest:

I consider myself as a highly self-driven individual and I am fond of exploring new things and getting out of my comfort zone. My research interests encompass a diverse array of fields within the realm of computer science and engineering. I am particularly drawn to computer software engineering and software system architecture, where I explore the design and development of robust, efficient, and scalable software solutions which can efficiently serve the growing software industry.

My research interests also lie in the areas of data science and business analytics, with a particular focus on projects like stock market analysis, software usage analytics, and metric analytics. I am intrigued by the ability of data-driven techniques to reveal patterns and trends, both in financial markets and software performance, enabling more informed decision-making. By applying machine learning models and statistical analysis to large datasets, I aim to develop predictive tools for forecasting market movements, optimizing software performance, and identifying investment opportunities. This blend of data science, business analytics, and software metrics fuels my ambition to create real-world solutions that drive financial and technological advancements.

Machine learning (ML) and artificial intelligence (AI) drives my quest to develop intelligent systems capable of making data-driven decisions. With the recent boom of AI among the general people, having a trustworthy AI system is all that the world is searching for. I want to develop practical implementation of the models and serve real world problems with the aid of computer intelligence.

Cloud computing is another area of keen interest, as it offers innovative approaches to data storage, management, and processing. I am also intrigued by Web 3.0 technologies, which promise to revolutionize the internet by enhancing security, privacy, and user autonomy.

Finally, I am committed to advancing web technology development, focusing on creating dynamic, user-friendly, and responsive web applications. These interconnected domains collectively fuel my ambition to contribute to cutting-edge research and technological innovations.

Research Experience & Publication:

Title: Investigating the Factors Affecting Risky Levels of Alcohol Consumption among Students Using Machine Learning Approach

Co-authors: Sara Fariha Shanchary, Ayman Ibne Hakim, Md Naved Meraz, Muhammad Shafayat Oshman

Supervisor: Muhammad Shafayat Oshman, Lecturer, North South University, Bangladesh

Abstract: Addressing the pressing issue of alcohol consumption among students is crucial for the well-being of young individuals and the community. Understanding and mitigating alcohol related challenges faced by young people is essential for their healthy development. This study utilizes machine learning models to analyze data from a Portuguese school, aiming to link students' alcohol consumption levels to personal and familial factors. The primary objective is to identify key factors associated with high alcohol consumption among students. After data preprocessing on their dataset, we employed various machine learning algorithms, including hyperparameter-optimized Decision Tree, Random Forest, Boosting, and Ensemble Learning. Our findings revealed that the decision tree algorithm performed well in predicting risky alcohol consumption for our target research question. Our selected feature subset showed strong positive correlation with the target variable, achieving an accuracy of 80.9 percent on the test set and 98.43 percent on the train set. Notably, this project breaks new ground by using explainable artificial intelligence to add reason to our prediction based on students' familial relationships, expanding upon previous research that also focused on demographic factors

Publication: The paper has been published in 2024 6th Asia Conference on Machine Learning and Computing (ACMLC 2024).

- The publication was fully funded by North South University Bangladesh.
-

Project Experience:

- **Senior Design Project-** Blockchain based Electronic Health record System- "[Medease](#)". The objective of this project is to develop a web application using IPFS and private blockchain to provide a secure and efficient way for patients to manage their medical records.
- **Research Paper-** A machine learning model investigating the factors affecting risky levels of alcohol consumption among students. The paper has been selected for publication in 2024 6th Asia Conference on Machine Learning and Computing (ACMLC 2024).
- **Course Projects-** Developed an online canteen service- "[NSU Canteen](#)" aiming to automate our university canteen. In this project me and my team developed a system where users can order food online, make online payment and take their meal from the counter using HTML, Tailwind CSS, JS, PHP and payment gateway API. Implemented modern web development strategies such as lazy loading, AJAX live search for maximum optimization and performance.

Also carried out white box testing on Django "templates" as a part of my software quality assurance and testing course. Implemented testing strategies, code walkthrough and review, and made test cases and executed them.

- **Junior Design-** Developed a Web app for encryption and decryption of files and saving them in cloud storage. This system also included a face recognition system on top of a google authentication API as a 2 factor authentication system- "[The Amazing App](#)".

Work Experience:

Pumpkin plus Agro Innovation Limited / Freelance Web Designer and Developer

April 2021-Current, Dhaka Bangladesh

Project Overview: Pumpkin Plus is a forward-thinking agro business company committed to providing high-quality agricultural products and services.

- Developed and maintained company portfolio website, ensuring optimal performance and a seamless user experience.
- Implemented modern web design principles and ensured websites are visually appealing and aligned with the company's brand identity. www.pumpkinplus.com

Pumpkin plus Agro Innovation Limited / Baseline Survey Analyst

March 2022, Dhaka, Bangladesh

Project Overview: As a Baseline Survey Analyst at Pumpkin Plus Agro Innovation Limited, I led the design, implementation, and analysis of a survey to gauge the impact of agricultural innovation initiatives. The survey assessed current community status and identified key indicators for future evaluations.

- Data Analysis- Utilized Microsoft Excel to organize, clean, and analyze the collected survey data via google form..
 - Report Generation- Compiled a comprehensive baseline survey report outlining key findings, trends, and recommendations.
 - Communication and Collaboration- Collaborated with stakeholders, including agricultural experts and community leaders, ensuring alignment with project goals.
-

Software expertise and Skills:

I possess a diverse set of technical skills, including proficiency in JavaScript, React, HTML, and CSS (with expertise in Tailwind and Bootstrap). My database management capabilities extend to MySQL, and I am adept in LaTeX for document preparation. I have experience with Node.js for server-side development and Python for machine learning applications. Additionally, I am proficient in Microsoft Excel and Word for data analysis and document creation, respectively. My creative skills include working with Illustrator for graphic design and Adobe Premiere Pro for video editing.

Awards and Achievements :

- Higher achievers award from Pearson Edexcel
 - Higher achievers award from The Daily Star, Bangladesh
 - Executive member of the Sports Club, overseeing multiple sports tournaments, demonstrating leadership and organizational skills.
-

Extra Curricular Activities:

- Organized Mastermind Model United Nations and Entrepreneur Conclave during high school. Administered event Security, Registration, Food and Logistics for seamless execution.
- Volunteered the highschool community service club
- Former national under-16 basketball player
- Served as a home tutor for O'Levels and A Levels candidates

References:

Muhammad Shafayat Oshman
Lecturer
Department of Electrical and Computer Engineering
North South University
Phone: +88 02 55668200 Ext. 6376
Email: muhammad.oshman@northsouth.edu
Work Profile: http://ece.northsouth.edu/people/mr-muhammad-shafayat-oshman/
Web: www.shafayatoshman.ca

Md. Naqib Imtiaz Hussain
Senior Lecturer
Department of Electrical and Computer Engineering
North South University
MS, EEE, University of Colorado at Boulder, USA (Y2003)
BS, EEE, Bangladesh University of Engineering and Technology, Bangladesh (Y2001)
Phone: +88 02 55668200 Ext – 6374
Email: naqib.hussain@northsouth.edu

Dr. Mohammad Asharafuzzaman Khan
Associate Professor
Department of Electrical and Computer Engineering
North South University
Ph.D., Computer Science, New Jersey Institute of Technology, New York, NJ, USA.
B. Sc., Computer Science & Engineering, BUET, Dhaka, Bangladesh.
Office: SAC 1047
Phone: +88 02 55668200 Ext – 6184
Email: mohammad.khan02@northsouth.edu