

# Mushfiqur Rahman Chowdhury

*Software Engineer | Samsung R&D Institute Bangladesh*

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Portfolio: <https://mushfiqur-chowdhury05.github.io/>

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## EDUCATIONAL BACKGROUND

**University of Dhaka, Bangladesh**

**Jan 2019 - Dec 2023**

BSc. in Software Engineering

- CGPA: 3.79/4.00

**Graduate Record Examinations (GRE)**

**Jul 2025**

- Quant: (170/170), Verbal (153/170), Analytical Writing (4.5/6.0)

**International English Language Testing System (IELTS)**

**Jun 2024**

- Overall: 7.5 (Listening: 8.5, Reading: 8.0, Speaking: 7.0, Writing: 7.0)
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## EXPERIENCE

**Software Engineer (Embedded Systems)**

**Samsung R&D Institute Bangladesh, Dhaka, Bangladesh**

**Dec 2023 - Present**

- Samsung Buds Audio Project
  - Developed multiple features on the Galaxy Buds platform, specially on Galaxy Buds 3 and Galaxy Buds 3 Pro devices.
  - Identify root causes of bugs reported by the testers and market customers and by analysing the logs from the buds, I developed patches to fix the bugs.
- Research & Innovation
  - Submitted DOI on preserving privacy for virtual assistants in multi-user scenario
  - Developed a PoC for determining the stress level of a user based on data collected from earbud sensors.
- **Technical Skills:** Real-time Operating Systems (RTOS), Android Studio, LLM security, Deep Learning, C/C++, Java, Kotlin

**Research Intern**

**University of Texas at Arlington, TX, USA**

**May 2025 - Present**

- Working under the supervision of Dr. Faysal Hossain Shezan.
- Working to develop a tool that would allow KLEE based symbolic execution on large scale tightly coupled projects such as tensorflow.
- **Technical Skills:** Program analysis, Automated Software Testing, LLMs for Software Engineering, C/C++

**Researcher**

**University of New Mexico, NM, USA**

**Jun 2025 - Present**

- Working under the supervision of Dr. Abdullah Mueen.
- Working to develop a tool that would perform analysis on the ethereum blockchain data to link address clusters based on temporal patterns.
- **Technical Skills:** Blockchain, Data Mining, Python

## Software Engineering Intern

Samsung R&D Institute, Dhaka, Bangladesh

Jan 2023-July 2023

- Developed a prototype using Real Time Operating Systems (RTOS) for the Buds Audio platform.
  - Developed a web application used internally for employee evaluation and quiz-taking at SRBD.
  - **Technical Skills:** PHP, Real-time Operating Systems (RTOS)
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## RESEARCH PROJECTS

### Tensorflow-KLEE

University of Texas at Arlington, TX, USA

May 2025-Present

- Under the supervision of Dr. Faysal Hossain Shezan, I am working to develop a tool that would perform symbolic execution on Tensorflow code.
- The approach generates a test harness for testing particular tensorflow APIs and extracts its related dependencies.
- **Technical Skills:** C++, Program analysis, Automated Software Testing.

### BorderBlaze: Boundary Point Segmentation from Aerial LiDAR Point Cloud Data

University of Dhaka, Dhaka, Bangladesh

Jul 2023-Dec 2023

- Developed a web-based tool to evaluate boundary point segmentation algorithms on a LiDAR point cloud dataset of building roof structures in a landscape.
- Implemented three different algorithms for evaluation: Neighbourhood Based Approach, Concave Hull Algorithm and Delaunay Triangulation.
- **Github Link:** <https://github.com/mushfiqiit/BorderBlazeSPL3>
- **Technical Skills:** FastAPI, Python, Computer Vision

### Detection of Various Crop Diseases From Images, A Convolution Neural Network based approach

University of Dhaka, Dhaka, Bangladesh

Sep 2023-Dec 2023

- Developed a CNN-based approach to detect plant diseases from an image dataset of plant leaves.
- Implemented image processing techniques such as pixel scaling and image augmentation.
- **Report Link:** <https://mushfiquirchowdhury05.github.io/files/CropDiseaseDetection.pdf>
- **Technical Skills:** CNN, Python, Image Processing

### Bangladesh Institute of Capital Market (BICM) website

Bangladesh Institute of Capital Market, Dhaka, Bangladesh

Apr 2022-Nov 2022

- Developed the backend of the official BICM website that uses python web scraping techniques to extract stock market data from the official Dhaka Stock Exchange (DSE) website.
- Solved multiple vulnerabilities of the application by using context based program analysis techniques which were exposed due to the dynamic changes in the DSE website.
- **Website Link:** <https://dfl.bicm.ac.bd/>
- **Technical Skills:** Python, Django, Web scraping, Program analysis.

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## ACADEMIC PROJECTS

### Save The Date: A Party Planner

Jan 2022-Jun 2022

#### University of Dhaka, Dhaka, Bangladesh

- Developed a party planning web application which serves as a centralised hub, connecting various party service providers (caterers, decorators, vendors etc.) with potential customers.
  - Developed a recommendation system using K-Nearest Neighbor algorithm to suggest a complete plan for services to avail based on user inputs like date, budget, and location.
  - **Github Link:** <https://github.com/saleheenshafiq9/SaveTheDate>
  - **Technical Skills:** Django, Python, ReactJS
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## ACHIEVEMENTS

### Inter Collegiate Programming Contest (ICPC) Dhaka Regional Contest 2021

- **Official Rank:** 23 (qualified to the contest from a pool of 1747 teams participating from the entire Bangladesh)
- **Team Name:** DU\_Untitled(4)
- **Standings:** <https://icpc.global/regionals/finder/Dhaka-2022/standings>
- **ICPC ID:** <https://icpc.global/ICPCID/OTLKXQQ6H3EW>

### Inter Collegiate Programming Contest (ICPC) Asia Dhaka Regional Site Online Preliminary Contest 2020

- **Rank:** 49 among 1272 teams
- **Team Name:** IITDU\_DeathStars
- **Standings:** <https://icpc.global/regionals/finder/Dhaka-Preliminary-2021/standings>

### Codeforces: Competitive Programming Platform

- **Title:** Expert (86 percentile among 600,000+ registered users)
  - **Max Rating:** 1619
  - **Link:** [https://codeforces.com/profile/Eastern\\_Eagle\\_](https://codeforces.com/profile/Eastern_Eagle_)
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## SKILLS

**Programming Languages:** Python, C/C++, Java, JavaScript, PHP, Kotlin

**Frameworks/Libraries:** FastAPI, Django, ReactJS, MySQL, Real-time OS, Android SDK

**Soft Skills:** Planning, Presentation, Teamwork, Documentation, Leadership

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## REFERENCES

Faysal Hossain Shezan  
Assistant Professor  
University of Texas at Arlington  
Texas, USA  
Email: [faysal.shezan@uta.edu](mailto:faysal.shezan@uta.edu)

Kazi Muheymin-Us-Sakib  
Professor  
Institute of Information Technology  
University of Dhaka, Dhaka, Bangladesh  
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