

# Md Mahfuzur Rahman Shanto

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## Objectives

Motivated final-year Software Engineering student seeking a Research Assistant role to contribute to machine learning research with an emphasis on **explainable AI**, **medical AI**, and **computer vision**. Experienced with end-to-end ML workflows (data prep, model training, interpretability, and evaluation) and comfortable collaborating on open, reproducible research.

## Research Interests

Machine Learning | Explainable AI (SHAP, LIME) | Medical AI | Computer Vision | NLP

## Skills

**Languages:** C/C++, Python, SQL

**Technologies & Tools:** Django, FastAPI, GitHub, Docker, Anaconda, NumPy, Pandas, Matplotlib, TensorFlow

## Education

**Daffodil International University**

Jan 2022 - Dec 2025

BSc. in Software Engineering

(Current CGPA: 3.70/4.0)

Relevant Coursework: Object Oriented Programming, Databases, Data Structures and Algorithms, Operating Systems, Artificial Intelligence, Machine Learning

## Research Experience

- **An Interpretable Machine Learning Model for Dengue Detection with Clinical Hematological Data:** Developed an interpretable ML model (DengueStackX-19) achieving **96.38%** accuracy for dengue diagnosis using hematological data, enhanced with SMOTEENN sampling and explainable AI (SHAP, LIME), Published in Healthcare Analytics, Elsevier (Q1, Citescore 11.2).

## Work Experience

- **Trainer at ACM Wing, DIUSEC:** Taught C Programming, logic building, and problem-solving fundamentals Successfully trained 500+ students.
- **Founder, SPC Academy:** Founded an EdTech platform focused on delivering innovative and student-centered ICT education in Bangladesh.

## Projects

- **Blog API (2025):** A simple blog platform API built with FastAPI with full CRUD functionality for blog posts. Integrated MySQL as the database backend, implemented data validation with Pydantic.
- **Personalized E-Learning Platform (Ongoing):** Building an AI-powered e-learning platform with personalized feedback and gamification features using Django and ReactJS.
- **Library Management System (2023):** Developed a library management system using Java and Spring Framework, handling book lending, user management, and due date tracking.
- **Discord Bot with Python (2025):** A Python-based Discord bot that responds to the command with random memes from Reddit. It demonstrates basic interaction with the Discord API and integration with external APIs.

## Problem Solving Profiles

- **LeetCode:** Solved 180+ problems on data structures and algorithms.
- **Codeforces:** Solved 430+ problems, participated in 70+ contests.
- **Beecrowd:** Top 1% problem solver at Beecrowd, previously known as URI Online Judge.

## Extra Curriculum Activities

- **ICPC 2024 Preliminary:** Team DIU\_3S ranked 14th among DIU 300+ Teams
- **Office Assistant, DIU Software Engineering Club:** Coordinated and organized various successful events, enhancing club activities and student engagement.
- **ACM Secretary, DIU Software Engineering Club:** Organized Code Trap Programming Contest, Break-Out Algorithm contests and promoted coding culture with various programming seminar and workshops.
- **Problem Setter and Judge:** Developed challenging problems and evaluated submissions, contributing to a competitive and engaging programming event.

## Certifications

- **Machine Learning Specialization (Coursera)**
- **The Legend of Python (Codexd)**
- **The Git & Github Bootcamp (Udemy)**