

Mohammed Afham Adian

afhamadian.03@gmail.com | [01319014062](tel:01319014062) | linkedin.com/in/mohammed-afham-adian

github.com/afhamadian

afhamadian.github.io/portofolio/

Education

Bangladesh University of Engineering & Technology, BSc in Computer Science & Engineering Nov 2022 – Present

Level 4, Term 1

- GPA: 3.81/4.0
- **Notable Coursework:** Computer Architecture, Operating Systems, Computer Networks, Database, Software Engineering Design & Principles, Deep Learning, Machine Learning, Artificial Intelligence, Compilers, Data Structures and Algorithms 1 & 2, Numerical Analysis, Linear Algebra, Probability and Statistics.

Experience

Software Engineer Intern, SocioFi Technology May 2025 – Sep 2025

- **Developed an web analytics and lead-generation agent** with session replay to analyze user behavior, identify potential leads, and generate actionable insights from website interactions.

Accomplishments

Best Novel Approach – IUT Datathon ([Repository](#)) IUT 12th ICT FEST

- Won “**Most Novel Approach**” for developing a framework for **Bengali hallucination detection** combining deterministic routers, four question-specific LLM-experts, category-gated RAG with hybrid retrieval and performance benchmarks.
- Obtained **0.934** public leaderboard Macro-F1 and placed **4th/222 teams** in Hold out set.

Champion at Project Showcasing ([Repository](#)) NWU CSE Fest 2025

- Developed NiramoyAI, a personalized **multi-mode healthcare agent** using LLM reasoning over patient-specific dynamic knowledge graphs, graph traversal for **long-term context retention**, GraphRAG, interpretable **multi-hop reasoning**, and reduced hallucination.
- Also selected among the **Top 10 CES Pavilion Exhibitors** at the **National Semiconductor Symposium & BEAR Summit 2026**, with the opportunity to present it to the **Prime Minister Tarique Rahman** and Cabinet members.

Top 15 Finalist – BUET DL Sprint 4.0 (Kaggle Notebook) BUET CSE FEST 2025

- Ranked **3rd/107** in **Bengali speaker diarization** and **12th/124** in **Bangla long-form ASR**, working on long form bangla audio **lectures, interviews, and conversations**.

Projects

Operating System Projects [xV6 Patch](#)

- Implemented **Multithreading** to enable parallelism and speedup execution and using C++ **Pthread** library
- Integrated a new System Call and a new **MIFQ Scheduling** Algorithm to the existing xV6 kernel

Compiler for Subset of C [Compiler Repository](#)

- Generated **8086 assembly from C** for the Intermediate Code Generation phase using ANTLR4 with JAVA
- Implemented Context Free Grammar Rules using ANTLR4 with JAVA for Syntax and Semantic Analysis
- Using JAVA Implemented **SDBM hash based Symbol Table**, used Flex for Parsing and Lexical Analysis

Adaptive TCP-WestwoodNew Congestion Control [Networking Repository](#)

- **Modified TCP-WestwoodNew** with **bandwidth-ratio-based** congestion window control, smoothed RTT-based **RTO estimation**, and RTT-triggered link-recovery signaling.
- Achieved approximately **0.51% higher average throughput** than TCP-WestwoodPlus across 20–100 node simulations, with a **peak improvement of ~0.77%** around 60 nodes.