

MD. TAFSIR UN NAHIAN
SYSTEMS ENGINEER / CSE
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PROFILE

Computer Science and Engineering graduate with hands-on experience in embedded systems, IoT sensor programming, database design, and API/system integration. Builds and troubleshoots complete systems across hardware, firmware, software, data, and mechanical assembly.

EDUCATION

2022-2026 Bangladesh University of Professionals
BSc in Computer Science and Engineering | CGPA 3.71/4.00
Thesis: Inter-Patient ECG Arrhythmia Classification and TinyML
2019-2021 Notre Dame College, Dhaka | HSC Science | GPA 5.00/5.00
2017-2019 BRRI High School | SSC Science | GPA 5.00/5.00

SELECTED ENGINEERING PROJECTS

BUP Bus Tracker

ESP32-based 4G GNSS vehicle tracker with FreeRTOS, MQTTS, two-way messaging, OTA, FastAPI, PostgreSQL, Redis, and a web client.

ECG Arrhythmia Classification and TinyML Deployment

CNN with inter-patient evaluation, TensorFlow Lite conversion, and on-device inference on ESP32.

ADDITIONAL PROJECTS

Energy Monitoring System - ESP32 power and safety sensing, protection logic, ESP-NOW, and self-hosted Home Assistant integration.

Machgari - Role-based digital fish market and fisheries advisory platform.

Automatic Solar Irrigation - Moisture-driven solar pump and web dashboard.

Blood Donation Management - React, TypeScript, FastAPI, and MySQL.

Used Car Platform - PHP/MySQL sales and rental workflows.

LUCAM Attendance - JavaFX desktop app with custom file storage.

EXPERIENCE

Oct-Nov 2025 Cybersecurity Intern, Byte Care Academy, Dhaka

Foundational cybersecurity and penetration-testing exercises against sandboxed systems.

TECHNICAL TOOLBOX

Programming: Python, C/C++, Java, JavaScript, TypeScript, PHP, Kotlin

Embedded: ESP32, RTOS, GPIO, ADC, UART, I2C, GNSS, MQTT, ESP-NOW

Backend: FastAPI, Node.js, Next.js, REST, WebSocket/SSE, JWT

Data/ML: PostgreSQL, MySQL, SQLite, Redis, TensorFlow, CNN, TinyML

Tools: Git, Docker, Linux, Wireshark, AutoCAD, Proteus

Workshop: Soldering, PCB assembly/rework, repair, mechanical assembly

COMMUNITY AND INTERESTS

Past Assistant Joint Secretary, BUP Computer Programming Club.

Competitive programming, CTF, Robo Soccer, travelling, and cycling.