MD NAIMUR RASHID

IoT & Robotics Engineering | AI • Edge Computing • Cybersecurity
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SUMMARY

Final-year IoT and Robotics Engineering student with hands-on experience building AI-driven embedded systems, autonomous robots, and real-time surveillance solutions. Proficient in Python, C++, YOLO-based object detection, edge AI deployment on Raspberry Pi, and IoT platform integration. Holds Google Cybersecurity and Cisco CCNA certifications. Seeking an internship or junior role in AI, IoT, or embedded systems engineering to contribute to innovative, real-world products.

TECHNICAL SKILLS

Languages: Python, C, C++, Java, C#
AI & Computer Vision: YOLO (object detection), CNN (image classification), OpenCV, TensorFlow (basics), NLP, SpeechRecognition
Embedded & IoT: Raspberry Pi, Arduino, ESP32, NodeMCU (ESP8266), Firebase, ThingSpeak, UAV/Drone integration
Networking & Security: OSI model, IPv4/IPv6, VLANs, ACLs, threat detection, incident response, Cisco Packet Tracer, Wireshark
Tools & Platforms: Git, GitHub, VS Code, Linux (basics), MS Office Suite, Telegram Bot API
Other: Circuit design, prototyping, debugging, Agile methodology, public speaking

PROJECTS

AI-Driven Autonomous Aerial Surveillance System April 2025 – April 2026
University of Frontier Technology, Bangladesh

- Built a UAV-mounted real-time multi-threat detection system using deep learning; models detect fire/smoke, traffic accidents, weapons, and violent activity simultaneously from live drone video feed.
- Deployed YOLO-based object detection and a CNN violence classifier entirely on a Raspberry Pi edge device, eliminating cloud dependency and achieving real-time inference at the edge.
- Engineered a Telegram Bot alert pipeline with multi-frame temporal validation to suppress false positives; confirmed threats trigger instant push notifications with captured evidence frames.
- Designed a lightweight, modular detection pipeline in Python/OpenCV enabling easy swap of detection models without changes to the alert or capture subsystems.

Algora AI – Python Voice Assistant Aug 2024 – Dec 2024
University of Frontier Technology, Bangladesh

- Developed a voice-controlled AI assistant using Python, SpeechRecognition, and pyttsx3 with NLP-based intent parsing to automate tasks such as app launching, news fetching, and file management.
- Architected modular codebase designed for extension into smart home and IoT control environments.

RaiMon OS – Lightweight Custom Operating System Feb 2025 – Aug 2025
University of Frontier Technology, Bangladesh

- Co-developed a mini OS from scratch in C# with core utilities — file manager, terminal emulator, system monitor, and calculator — using Agile sprints for iterative delivery.
- Optimized for low resource footprint, demonstrating understanding of OS-level memory and process management concepts.

Autonomous Fire-Fighting Robot Feb 2025 – Aug 2025
University of Frontier Technology, Bangladesh

- Engineered an autonomous robot using Arduino Uno and flame sensors to detect and extinguish fires within a 1-meter range in under 5 seconds, with NodeMCU (ESP8266) sending real-time Telegram alerts.
- Integrated servo motor, water pump, and mobile chassis for precise directional suppression, and implemented C++ motor control logic for autonomous navigation toward the fire source.

Smart Vacuum Cleaner Robot Aug 2024 – Dec 2024
University of Frontier Technology, Bangladesh

- Built a tri-mode cleaning robot supporting autonomous obstacle avoidance (ultrasonic sensors), Bluetooth remote control, and Google Assistant voice commands via NodeMCU cloud integration.

Solar-Powered Smart Plant Care System Jan 2024 – May 2024
University of Frontier Technology, Bangladesh

- Designed an IoT system automating plant watering based on soil moisture sensor data, with solar panel tracking and temperature/humidity monitoring for sustainable, off-grid operation.

Smart Goggles for the Visually Impaired Jan 2024 – May 2024
University of Frontier Technology, Bangladesh

- Created assistive wearable using ESP32-CAM and ultrasonic sensors for real-time obstacle detection; alerts user via buzzer, combining embedded systems and computer vision for accessibility.

Other: Line Following Robot (Arduino + IR sensors) | Remote Patient Health Monitor (wireless vitals prototype)

CERTIFICATIONS

- **Google Cybersecurity Professional Certificate V2** — Coursera, Oct 2025 [verify]
- **CCNA: Introduction to Networks** — Cisco Networking Academy, Sep 2025 [verify]
- **Introduction to Cloud Computing** — Coursera, Sep 2025 [verify]
- **Job Ready (99th percentile)** — Wadhwani Foundation [verify]

EDUCATION

B.Sc. in IoT and Robotics Engineering Running (Level 4, Term 1)
University of Frontier Technology, Bangladesh — Faculty of Cyber Physical System Engineering CGPA: 3.15 / 4.00

Higher School Certificate (HSC) — Science 2021
Cumilla Government City College, Cumilla Board GPA: 5.00 / 5.00

Secondary School Certificate (SSC) — Science 2019
Ibne Taimia School and College, Cumilla Board GPA: 5.00 / 5.00

LANGUAGES

Bengali (Native) | **English** (Fluent) | **Hindi** (Fluent)

REFERENCE

MD Toukir Ahmed — Assistant Professor, University of Frontier Technology, Bangladesh
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