

SAMIA HOSSAIN

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PROFESSIONAL SUMMARY

Final-year Electrical and Electronics Engineering student with an interest in embedded systems, automation, IoT, and VLSI. Experienced in microcontroller programming, circuit design, and hardware prototyping. Currently working on a thesis focused on sensor applications of 2D materials. Always eager to learn and apply engineering knowledge to practical projects.

EDUCATION

Bangladesh University of Engineering and Technology (BUET), Dhaka

Bachelor of Science in Electrical and Electronics Engineering (EEE)

2022 – Present

PROJECTS

- Solving the Steady State Heat Conduction Equation with Heat Generation in Two-Dimensional Space Using Numerical Methods
 - An Analog Calculator (2-Digit Input) Utilizing Operational Amplifiers
 - Rewinding a Single-Phase Induction Motor
 - Modeling a Solar and Wind Turbine-Based Power Plant and Assessing the Impact of Overload Faults in the IEEE 6-Bus System
 - EcoWatch: Smart Greenhouse Environment Management with Integrated Fire Safety Measures
 - Biometric Authentication System for Classroom Management via Voice Recognition
 - Automated Railway Traffic Management System
 - Frequency Converter Featuring Real-Time Display and Tuning Capabilities
 - Autonomous Fire Extinguishing Robot
 - IoT-Based Smart Bangla Notice Board with Real time Calendar & Clock
 - Design and Simulation of a Class-A RF Power Amplifier for the GSM 900 MHz Band Using Common-Emitter Topology
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EXPERTISE

- Embedded Systems & IoT
 - Analog & Digital Circuit Design
 - Control Systems & Automation
 - Signal Processing & Machine Learning
 - Hardware Prototyping & PCB Design
 - Programming: MATLAB, Python, C/C++, Arduino, Verilog
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Soft Skills & Languages

- Problem-Solving & Critical Thinking
 - Research & Analytical Skills
 - Collaboration & Communication
 - Adaptability & Continuous Learning
 - Languages: English (Fluent), Bangla (Fluent)
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EXTRACURRICULAR ACTIVITIES

- Student Member, IEEE BUET Student Branch
- Member, Robotics Club of BUET
- Member, Math Club & Science Club
- Participated in quiz and poster competitions