SANDIP MAITY

Electronics Engineer

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ABOUT ME

An **Electronics & Communication Engineering (ECE) student** passionate about **embedded systems**, **IoT**, and **automation**. Skilled in **microcontrollers**, **PCB design**, and **circuit simulation**, with hands-on experience building real-world projects.

I enjoy solving technical challenges and continuously improving my **programming & hardware skills** to create **efficient, real-world solutions**. Looking for opportunities to contribute to innovative projects.

EDUCATION

2022-2026
Techno Engineering College Banipur

B. Tech in Electronics & Communication Engineering
Involved in various hands-on projects that enhanced practical knowledge and skills in electronics design and implementation.

2020-2022
Chandanpur Ananda Institution

Higher Secondary (Science)
Secured 94%, enhancing logical reasoning, numerical aptitude, and a deep understanding of **Physics**, **Chemistry**, and **Mathematics**.

2014-2020
Kanpur Sriguru Sikshaniketan

Secondary (Science and Arts)
Scored 91%, developing a strong foundation in **science and mathematics** with analytical and problem-solving skills.

SKILLS

- **Programming language**

  C , C++ (Intermediate) , MATLAB (Intermediate)

- **Microcontroller**

  Arduino , STM32 (STM32F103C8T6) , Intel 8085 (Basic Assembly)

- **PCB & Circuit Design Tools**
  KiCad (Beginner)
  NI Multisim, LTSpice (Intermediate)

- **IoT & Automation**

  Sensor Integration: DHT11, PIR, MQ-2, Ultrasonic, IR, etc.
  Data Logging & Processing , Cloud Communication (Basics)

PROJECTS

- **Obstacle-Avoiding Car (Arduino-Based)**

  Description: Designed an autonomous robotic car using an ultrasonic sensor and Arduino, capable of detecting and avoiding obstacles in real time.

  Tech Used: Arduino, C, Ultrasonic Sensor

  Impact: Implemented an optimized path-finding algorithm, improving response time by 30%.

- **Weather Monitoring System**

  Description: Developed a real-time weather monitoring system using DHT11 sensors and an STM32 board to measure temperature and humidity.

  Tech Used: STM32, C, SD Card, Data Logging

  Impact: Achieved accurate real-time temperature & humidity monitoring, storing data on an SD card for further analysis.

- **Myntra Clone Website**   GitHub Link

  Description: Built a front-end replica of the Myntra e-commerce platform to enhance UI/UX design skills.
  Tech Used: HTML, CSS

  Impact: Developed a fully responsive interface, improving CSS layout structuring and design consistency.

- **Smoke Detection and Alarm System (Arduino-Based)**

  Description: Developed an Arduino-based smoke detection system using an MQ-2 gas sensor, which triggers an alarm when smoke levels exceed a threshold.

  Tech Used: Arduino, C++, MQ-2 Sensor, Buzzer, LED

  Impact: Enhanced fire safety by providing early smoke detection, reducing response time for emergency alerts.

- **PIR Motion Detector Alarm (Home Security System)**

  Description: Designed an Arduino-based motion detection system that uses a PIR sensor to detect movement and activate an alarm for security purposes.

  Tech Used: Arduino, C++, PIR Sensor, Buzzer, LED

  Impact: Improved home security by providing real-time motion alerts, making it ideal for intruder detection and automation.

RELEVANT COURSES

- Introduction to Programming with MATLAB by Vanderbilt University -- View Certificate
- Crash Course on Python by Google -- View Certificate
- Programming Fundamentals by Duke University -- View Certificate
- Embedded For Beginner by NIELIT Calicut -- View Certificate

SUBJECT PREFERENCE

- Microcontrollers
- Digital Electronics
- IoT & Automation
- Programming

LANGUAGE

- **English --** Proficient in reading, writing, and speaking.
- **Hindi --** Fluent in communication and comprehension.
- **Bengali --** Native language; excellent command in speaking and writing.

HOBBIES

- **Playing Sports --** I enjoy playing badminton and cricket in my free time.