

# MONESH BOROLE

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## EDUCATION

### AISSMS IoT

AUG 2023 – DEC 2027

Bachelor of Technology in Electronics and Telecommunications | CGPA 8.64

## SKILLS

- **Core Electronics:** Analog & Digital Electronics, Signal Conditioning, Power Supply Basics
- **Embedded Systems:** Arduino, ESP8266, PIC18F4550
- **Sensors & Interfacing:** Load Cell (HX711), Ultrasonic Sensor, OLED (I2C)
- **Programming:** C, C++, Embedded C (Basics), Python
- **Tools & Simulation:** Multisim 11.0, Arduino IDE, PCB Design (Fundamentals)
- **Hardware Skills:** Circuit Debugging, Hardware Testing, Fault Analysis, Documentation

## EXPERIENCE

### MINILEC INDIA Pvt. Ltd

JUN 2025 – JUL 2025

#### *Technical Intern*

Pune, India

- Executed functional testing and validation of industrial electronic protection devices using defined test procedures and safety checklists.
- Performed fault analysis and documented test observations as per safety standards
- Gained exposure to industrial electronics, compliance, and product lifecycle processes

### ASTRONIC TECHNOSYSTEM LLP

DEC 2024 – DEC 2024

#### *Intern*

Pune, India

- Performed hardware debugging using multimeter and basic lab instruments; identified and resolved connection and component-level issues.
- Assisted in circuit validation, testing procedures, and technical documentation for electronics prototypes.
- Gained hands-on experience in electronics testing, including sensor and module-level verification.

## PROJECTS

### IoT-Based Weighing Scale Machine | *Embedded C, ESP8266, HX711, Load Cell, Blynk, ThingSpeak*

MARCH 2025

- Developed a 300 kg IoT-enabled weighing system using a load cell with HX711 amplifier interfaced to ESP8266
- Implemented real-time weight measurement, calibration, and tare/reset functionality for accurate readings.
- Integrated Blynk for live weight monitoring and ThingSpeak for cloud-based data logging and graphical analysis.
- Designed threshold-based alert logic to detect low-weight and abnormal operating conditions.
- Displayed real-time weight values on an OLED display for local visualization.

### Smart Zebra Crossing – Automation &Safety System | *Arduino, Servo Motors, Sensors, Embedded C*

APRIL 2024

- Built an automated pedestrian and traffic safety system using Arduino-based control logic..
- Implemented servo-controlled barricades synchronized with traffic signal states to manage pedestrian crossings.
- Integrated obstacle detection sensors to prevent unsafe barricade operation.
- Designed signal-based automation and safety interlocks to ensure reliable and fail-safe operation.

### Obstacle Detection and Indication System | *PIC18F4550, Ultrasonic Sensor, Embedded C*

AUG 2023

- Designed an embedded obstacle detection system using PIC18F4550 microcontroller and ultrasonic sensing.
- Implemented distance-based object detection with LED indication for visual alerts
- Programmed the system in Embedded C, ensuring real-time response and stable operation.