SHANTANU MARATHA

ECE Undergraduate | Embedded Systems Engineer (ESP32, Sensors, IoT)

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Linkedin | Portfolio | GitHub | LeetCode

EDUCATION

Thapar Institute of Engineering and Technology — Patiala, Punjab

Electronics and Communication Engineering | Bachelor of Technology — August 2025 - Present

EXPERIENCE

Grosity | Early-Stage Founding Engineer — Patiala, Punjab | October 2025 - Present
- Developed and deployed the companys public website using AI-assisted workflows (Claude, GitHub Copilot, Kiro IDE).
- Contributed to early-stage R&D for autonomous payload-delivery drone systems, including embedded electronics and control logic.
- Worked with B2B and D2C product models, helping align engineering decisions with business strategy.

SKILLS

Programming Languages:	C, C++ (Arduino), Python, JavaScript
Libraries/Frameworks:	Wire (I2C), ESP-IDF, Arduino Framework, UART, MQTT
Tools / Platforms:	Git, GitHub, Kiro, Arduino IDE, Vercel, KiCad
Databases:	Firebase

PROJECTS / OPEN-SOURCE

Zephyr-Station | Link   *C++*

ESP32-based environmental monitoring system with real-time sensor acquisition, OLED display, SD card data logging, and threshold-based alerts

Jolt-Locator | Link   *C++*

GPS-based true-north navigation system running on ESP32 with real-time heading and location processing.

The-Ruin-Machine | Link   *C++*

Probability and stochastic-model simulator implemented on ESP32 with physical I/O (OLED + buzzer).

CERTIFICATIONS

- Internet of Things - **MIT Professional Education x Santander Open Academy**
- Introduction to Generative AI - **MIT Professional Education x Santander Open Academy**
- Google: Artificial Intelligence and Productivity - **Google x Santander Open Academy**
- Python - **Santander Open Academy**
- High Performance Leadership: Lessons from Formula 1 - **Formula 1 x Santander Open Academy**

HONORS & AWARDS

- Ideastorm Punjab Zonals Winner IIT Roorkee E-Summit 26'
- Competitive Programming - Solved 75+ problems on CodeChef, actively practising data structures and algorithms.
- Olympiads - Winner of multiple zonal and state-level Olympiads in Maths, Science, and Language.
- Innovation - Developed a Smart Blind Stick for real-time obstacle detection and alerts.