

SWATI PATHAK

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EDUCATION

- ECE | Dr. S & S S Ghandhy Government Engineering College 8.56 | 2025
- XII(GSEB) | T & T.V Sarvajani School 76% | 2021
- X(GSEB) | Shantiniketan Ideal Academy 82% | 2019

SKILLS

- C, C++, Microcontroller programming
- RTOS
- Communication protocol (UART, I2C, SPI, Bluetooth, Wi-Fi, CAN)
- Altium and Proteus for PCB Designing
- ESP32, STM
- Embedded systems design
- Firmware development

SKILLS IN PROGRESS

- Bare Metal Programming
- Device Driver Development

INDUSTRIAL TRAINING & Internship

- 3 Months Internship as Embedded Sytem Engineer
Completed 3 months internship as embedded engineer in the R&D department at Mindron.
- 10 Months experience as Embedded Engineer at Mindron
- 6 months firmware training at Emertxe.

PROJECT

- **Weighing scale digital data reading**
 - Reading the data of weighing scale using Bluetooth and represent it on customized application
- **Diamond Counting machine**
 - Developed a diamond counting system using ESP32 and LFL1402 photodiode sensors to detect diamonds passing through a sensing aperture.
 - Designed a custom vibrator mechanism with adjustable frequency to control diamond movement from feeder tray to detection zone.
- **Diamond detection machine**
 - Did research and development on diamond detection machines which use spectrum-based concepts for detection of diamonds.
- **Designed Grain quality detection machine**
 - Designed complete Hardware for grain quality detector machine which uses led of different wavelengths which is controlled with TLC5947 Led driver and TLC5160 stepper motor driver for smooth and faster up & down mechanism with ESP32 as main controller.