APURVE TRIVEDI

Mobile : 7972816556 | E-mail: apurvetrivedi21@gmail.com | LinkedIn: Apurve Trivedi | GitHub: Apurve7

Education

B.Tech in Electronics and Communication Engineering CGPA : 9.24
Shri Ramdeobaba College Of Engineering and Management,Nagpur *2022 – 2026*

Higher Secondary Certificate(12th Grade) Percentage : 89.3
Global Pubic School and Junior College,Nashik *2021*

Secondary School Certificate(10th Grade) Percentage : 87.4
Podar International School,Nashik *2019*

Projects

LPG Weight Monitoring and Booking System | *Arduino, GSM (SIM800L), HX711* Feb 2025 – Mar 2025

- Designed an automated system to continuously monitor LPG cylinder weight using a load cell and HX711 amplifier.
- Programmed an LCD interface to display real-time weight data and system status alerts
- Engineered an auto-booking feature using a SIM800L GSM module to send SMS alerts and initiate calls when weight falls below a set threshold

Smart Parking System Using IoT | *ESP32, Blynkk App, IR Sensors* Mar 2025 – Apr 2025

- Deployed IR sensors at each parking slot to provide real-time occupancy detection.
- Developed an IoT-enabled mobile interface using the Blynkk app for remote monitoring and parking reservations
- Implemented a booking management algorithm to automatically release reserved slots if not occupied within a 10-minute window.

STM32-Based Automation and Control Systems | *STM32F401RE* May 2025 – June 2025

- Developed custom drivers for a 7-segment hexadecimal display (0-F) and a 16x2 LCD with dynamic text scrolling.
- Integrated multiple sensors (LDR, Microphone, Touch) to build event-driven systems like automated counters and a touch-activated alarm.
- Designed a proof-of-concept home automation system using relays for appliance control and a SIM900A GSM module for remote notifications

Arduino Sensor and Actuator Integration | *Arduino Uno* July 2025 – August 2025

- Programmed various digital I/O interfaces, including 7-segment displays, LCDs, and Tri-Colour LEDs for data and status visualization.
- Implemented Pulse Width Modulation (PWM) with an L293D driver for precise bi-directional speed control of a DC motor.
- Integrated a DHT11 sensor and an ESP8266 Wi-Fi module to create a wireless environmental data logger

Technical Skills

Languages: C, C++, SystemVerilog, Assembly (8085, 8086)
Microcontrollers and Processors: ARM Cortex-M (STM32F401RE, STM32F303RE),ESP32,Arduino Uno,Intel 8051, 8085 and 8086
IDE and Development Tools: Keil µVision, MBED Studio, Arduino IDE, MATLAB,EDA Plauground
Communication Interfaces: UART, I2C, SPI, ADC, PWM
Wireless Protocols: Wi-Fi (ESP8266/ESP32), Bluetooth (HC-05), GSM (SIM900A)

Certifications and Patent

1) Assembly Language Programming for 8085,8086 and 8051| Unacademy
2)SystemVerilog for Verification part 1 : Fundamentals | Udemy
3)Academic Excellence| RCOEM
(*)Published Patent on “A LPG CYLINDER MONITORING AND SAFETY SYSTEM”
(*)Verilog for an FPGA Engineer with Xilinx Vivado Design Suite (Its my ongoing course on Udemy)