Sachin Suthar

Phone: +91 9302839268 | Email: sachinsuthar8503@gmail.com | GitHub | Leetcode | Linkdin

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Technical Skills

Programming Languages: Embedded C, Python, Java (basic)
Embedded Platforms: Raspberry Pi, Arduino, ESP32, NodeMCU ESP8266, 8051, STM32 (familiar)
Simulation & Design Tools: MATLAB, LTSpice, Proteus, Multisim, Arduino IDE, KiCad
Embedded Toolchains: Keil uVision, STM32CubeIDE
Communication Protocols: UART, I2C, SPI
Version Control: Git, GitHub

Education

VIT Bhopal University   Bhopal, Madhya Pradesh
BTech Major in Electronics; Minors in Artificial Intelligence   Aug'21-May'25
Cumulative GPA: 8.88/10 | 100% Scholarship

12th Standard   Mandsaur, Madhya Pradesh
District topper | Achieved: 95.6% | Top 1% student nationwide   May'19-May'21

Projects

AirGuard 360

- Developed a microcontroller-based air quality monitoring device using MQ135, DHT11 temperature & humidity sensor, and ESP8266, implementing UART communication for data transmission.
- Designed sensor circuits with voltage shifting, power regulation, and I2C 16x2 LCD for real-time local display.
- It Enabled wireless monitoring via Blynk and ThingSpeak with real-time gas level alerts.

. **Heater Control System**

- Built a temperature-controlled heater system using Arduino Uno, DHT22 sensor, LED, buzzer, and 16x2 I2C LCD to display real-time temperature and system state.
- Implemented a state machine-based control logic with UART serial monitoring and overheat protection, including buzzer alerts and LED indicators.
- Designed hardware on breadboard and simulated using Wokwi, utilizing Timer1 interrupts for precise 1-second sensor reads and display updates.

Sinchai

- An automated IoT irrigation system using NodeMCU ESP8266, soil moisture, and DHT11 sensors for real-time monitoring.
- Monitored soil moisture (10–60%), temperature (±0.5°C), and humidity (±2%), and controlled irrigation via relay-based motor activation below 30% and deactivation above 50%.
- Achieved a 30% improvement in water efficiency and reduced power consumption through solar energy integration.

Co-curricular

- Technical Lead at AIEM Club, organized 4 technical events and handled 500+ participants.
- Volunteered at a 3-day rocketry event KARMAN of Seds Nebula club gained valuable experience.
- Solved 800+ DSA problems on LeetCode and GFG, building strong algorithmic and logical skills.

Extracurricular & Achievements

- Honored with STARS Scheme at VIT Bhopal University for securing 1st rank in the 12th class with 95.6% in the district, awarded with 100% scholarship.
- Recognized as a top 1% student nationwide in Board Exams, honored with the INSPIRE Award.
- 2nd place in Ad-Zap Contest at AdVITya, the Inter-University Techno-Cultural Festival, VIT Bhopal   .
- Member at VItRonix Club, VIT Bhopal promoted 2 technical events.

Certifications & Training:

- IOT Devices, Coursera (Jan'2023)
- MATLAB Fundamentals, MathWorks. (Apr'2023)
- Artificial Intelligence and Machine Learning Powered by Google Developers. (Dec'2023)
- Foundation of Embedded Systems with ARM Cortex and STM32 (July'2024)

Languages & Hobbies

Languages: Fluent in Hindi, and English; Conversational Proficiency in Malvi
Hobbies: Explore ecotourism and sustainable travel, Playing cricket, and badminton.