

Ronaak Diamond

+91 7749086133

ronaak.diamond@gmail.com

github.com/Ronaak17

Education

Vellore Institute of Technology, Chennai
B.Tech Electrical and Electronics Engineering

2023 – 2027 (Expected)
CGPA: 8.67 / 10.0

Mother's Public School
Class XII : 89.8%
Class X : 94%

Technical Skills

Programming: C, Python, Java

Embedded: ESP32, Arduino, GPIO, Timers, Interrupts, UART

Power Electronics: DC-DC Converters, Inverters, PWM, Closed-Loop PI Control

Tools: MATLAB, Simulink, KiCad, PLC Programming, HMI

Projects

Smart Energy Management System MECA Cup 2026 Finalist

- Designed PLC-HMI based smart energy management integrating servo drive, IR sensing, vision system and ML-based optimization.
- Implemented industrial control logic with real-time monitoring and automation.

Closed-Loop Boost Converter with PI Control (MATLAB/Simulink)

- Designed boost converter with PWM switching and voltage feedback regulation.
- Implemented PI controller and analyzed transient response and ripple.

12V 220V DC-AC Inverter

- Developed MOSFET-based inverter producing 220V AC (50 Hz).

Gesture Controlled Car (ESP32 + NRF24L01)

- Built wireless gesture-controlled vehicle with real-time RF communication.

Predictive Maintenance System

- Developed vibration monitoring system and applied MATLAB-based signal analysis.

Experience

Embedded System Design Training Maven Silicon (Online)

- Worked on embedded C, microcontroller architecture, GPIO, timers and interrupts.

Certifications

- PLC and Industrial Automation Workshop
- PCB Design and Fabrication Workshop

Achievements

- Top 200 Smart India Hackathon (College Level)
- 1st Place FIFA Auction Event (Technovit)