SRINIVASA MANIKANTA RAJAPANTULA

Electrical & Electronics Engineering Student | Embedded Systems & IoT

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PROFESSIONAL SUMMARY

Final-year EEE student with hands-on experience across embedded systems, industrial power infrastructure, and IoT product development. Built and deployed 4+ end-to-end hardware/software projects, including an award-winning IoT wearable (2nd Prize, A-HACKS 2026 Hardware Category). Completed industrial training on 132kV/11kV substation operations and 5MW turbo-generator systems at Coromandel International. Seeking full-time roles in Embedded Systems, Industrial Automation, or IoT Engineering.

EDUCATION

B.Tech, Electrical & Electronics Engineering — CGPA 7.5 2024 – 2027

Diploma, Electrical & Electronics Engineering — 75% 2021 – 2024

SSC (Class 10) — 90.3% 2021

TECHNICAL SKILLS

Programming: C, Embedded C, Python, MATLAB

Embedded Systems: ESP32, Arduino, UART, I²C, SPI, MQTT

IoT: System Design, Cloud Integration (Firebase), Real-Time Monitoring

Power Systems: Generation, Transmission & Distribution, Smart Grid Concepts

Power Electronics: Converters, Inverters, Motor Drives, PWM Control

Electrical Machines: DC & AC Machines, Transformers

Tools: MATLAB/Simulink, Git, GitHub, Firebase

PROJECTS

Firefighter Safety Monitoring Device (SFMD) *(ESP32 · Firebase RTDB · Next.js)* 2025 – 2026

- Engineered an IoT wearable combining fall detection (MPU-6050), GPS tracking (NEO-6M), and gas/environmental sensing (MQ-2, DHT11) with a live cloud dashboard for real-time firefighter monitoring.
- Authored full technical documentation and an academic paper for the system.

Color Ohm *(React Native · Expo)* 2024 – 2025

- Built and published a mobile app for resistor color-code decoding and electronics reference, shipped through 3 iterative releases (v1.0.0 → v1.2.1) adding SMD decoding, history, and favorites.

Single-Axis Solar Tracker *(LDR · Relay Logic · DC Gear Motor)* 2023

- Designed a relay-based dual-LDR tracking circuit that improved solar energy capture by ~30% versus a fixed-panel baseline.

Automatic Exhaust Fan *(Arduino UNO · MQ-2 · Relay)* 2023

- Built a gas-sensing automated ventilation system with threshold-based auto-activation and manual override for safety compliance.

INTERNSHIP / INDUSTRIAL TRAINING

Industrial Trainee — Electrical & Electronics — Coromandel International Limited, Visakhapatnam 6th Sem, 2024

- Analyzed 132kV/11kV substation operations, mapping power distribution flow across multiple plant sections.
- Studied the 5MW Turbo Generator (TG) station, evaluating waste-heat-to-power recovery from the sulphuric acid plant process.

CERTIFICATIONS

Electrified Systems Design Engineer (MathWorks) · Industrial IoT (IIoT) · Solar PV System Design · Introduction to IoT (NPTEL) · PLC and HMI Basics (Coursera)

ACHIEVEMENTS

- 2nd Prize, Hardware Category — A-HACKS 2026, for the Firefighter Safety Monitoring Device (SFMD) among competing hardware teams.

WORKSHOPS / TRAINING

Drone Technology · 3D Printing · Electric Vehicle Technology

LANGUAGES

English and Telugu