

- Understood Data acquisition, communication protocols (IEC60870, DNP3, Modbus, etc), and RTU/IED Integration.
- Observed how SCADA interfaces with Field devices for fault detection, load management, and outage restoration, VAR Control.

Internet of Things , Samsung Innovation Campus
New Delhi

Aug 2024 to Oct 2024

- Understood the fundamentals of IoT architecture, communication protocols (MQTT, HTTP, Wifi, Bluetooth), and cloud platforms.
- Worked with Microcontroller (Arduino/NodeMCU/ESP32/ESP8266) for sensor data acquisition and control application.
- Implemented real-time data monitoring and visualization using platforms like Thingspeak/Blynk/ Firebase.
- Developed basic Projects demonstrating data Transmission, Remote monitoring, and alert generation.
- Enhanced technical skills in embedded and design relevant to IoT solutions.

Electrical Work Shop, Northern Railway Headquarter Office
New Delhi

Aug 2023 to Sept 2023

- Learned the construction, working principles, and application of DC & AC traction motors in railway systems.
- Understood winding techniques, insulation methods, and rewinding processes for traction motors.
- Observed and participated in motor disassembly, inspection, and fault detection (bearing faults, coil damage, insulation failure).
- Gained hands-on knowledge of testing procedures such as insulation resistance, high voltage testing, and load testing.

Automation and protection Department , TATA Power Delhi Distribution limited
New Delhi

Sept 2021 to Oct 2021

- Understood the working principle and applications of protective relays (electromechanical, static, and numerical).
- Gained exposure to substation automation systems, SCADA, & Distribution management systems for real-time monitoring.
- Observed relay coordination, fault detection, and isolation techniques to ensure the system's reliability.
- Acquired knowledge of IEC protocols and RTUs, IEDs used in automation and protection networks.