



M Akhilesh

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EDUCATION

SECONDARY EDUCATION

Kendriya Vidyalaya Bhandup, Mumbai
2021 - 2023

BACHELOR OF TECHNOLOGY

B. Tech, Electronics and Communication Engineering | SRM University
2023 - 2027

SKILLS

- Embedded Hardware: ESP32, STM32, BME680 Sensors, GPS, Arduino, VLSI Digital Design
- Protocols & Architecture: I2C, UART, SPI, Network Security Standards, OT Defense, LoRa
- Software & Data: C/C++, Python, Verilog, Machine Learning, Streamlit, NLP, MQTT
- Tools: Git, MATLAB, Xilinx Vivado, Wireshark, Nmap, EasyEDA, Thingspeak,

KEY RESEARCH & PROJECTS

SAFE-IoT: Smart Analytics Framework for Spoilage Detection | Lead Researcher, Published Research

- Engineered a low-cost (**₹2,300**) hardware system to detect food spoilage **12 hours earlier** than human senses.
- Co-designed the hardware architecture using **ESP32** and **BME680** sensors, optimizing for 12+ hours of battery life.
- Developed a **Random Forest** classifier (Edge ML) achieving **97.22% accuracy** across 5 distinct food categories.
- Implemented a multi-modal fusion algorithm combining Gas Resistance (VOCS), Humidity, and Temperature data.

LoRaWAN-Based Vehicle Tracking System | IoT Developer

- Built a low-power GPS tracker using Arduino and LoRaWAN modules achieving a 15km range.
- Reduced power consumption by 80% compared to traditional GSM trackers.
- Developed a real-time dashboard using Streamlit and MQTT to visualize geospatial data and geofencing alerts.

Network Threat Hunting & Defense | Security Analysis

- Executed vulnerability assessments on Operational Technology (OT) networks using Nmap and Wireshark.
- Simulated intrusion scenarios to test defensive protocols against common network attacks.

PROFESSIONAL EXPERIENCE

Embedded Systems Intern | Camware Technologies

June 2025 – July 2025

- Assisted in the deployment of embedded monitoring systems for industrial applications.
- Validated hardware integration for I2C communication protocols, ensuring stable data transmission.
- Debugged real-time signal processing issues in microcontroller firmware.

Network Security Intern | AICTE NEAT

Jan 2025 – March 2025

- Conducted threat detection analysis, focusing on identifying anomalies in network traffic patterns.
- Documented defensive mechanisms for securing critical digital infrastructure.

HONORS & ACHIEVEMENTS

- Finalist, NIOT presents Avishkar Hackathon (2025): Recognized for the LoRaWAN Vehicle Tracking System design.
- Finalist, Tamizhi Hackathon (Startup TN): Developed an AI-powered Tamil news summarizer using NLP.
- Certified Cybersecurity Associate : Fortinet.