

BHARANI KR

IoT & Cyber Security Engineer | Embedded AI Developer
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Summary

Hardware-software engineer focused on real-time embedded systems, sensor fusion, and computer vision. Strong foundation in C/C++ and Python with hands-on experience in YOLO-based object detection, IoT firmware development, and full-stack web applications. **Seeking Summer 2026 Internships in Embedded Systems, AI/ML, or IoT.**

Education

B.Tech in Cyber Security & IoT

Expected 2028

Sri Ramachandra Faculty of Engineering and Technology (SRET), Chennai

Relevant Coursework: Embedded Systems, Network Security, Data Structures, IoT Protocols, Machine Learning, Computer Vision.

Technical Skills

Languages	C, C++, Python, JavaScript, SQL, HTML/CSS
Hardware & IoT	ESP8266, ESP32, Arduino, Raspberry Pi, I2C/SPI, UART, Sensor Integration
AI & Vision	YOLOv8/v11, PaddleOCR, OpenCV, Google MediaPipe, TensorFlow Lite
Web & Tools	React, Next.js, Node.js, Flask, PostgreSQL, MongoDB, Supabase, Prisma, Git
Platforms	Linux, Vercel, Render, QGIS, Arduino IDE, VS Code

Engineering Projects

TruFleet: Vehicle Authorization Platform | *React 18, Node.js, Supabase, PostgreSQL* *VIT TetherX 2026*
RLS

- Use Case:** SaaS platform for commercial vehicle identity management, insurance verification, and automated fleet scheduling.
- 2nd Place (National Hackathon):** Built a 5-step compliance chain and implemented Supabase RLS for multi-org data isolation.

TITAN-V2 Autonomous Rover | *C++, ESP32, ESP8266, ESP-CAM, WebSockets, I2C* *2025*

- Use Case:** Autonomous exploration rover featuring real-time video streaming and a 6-axis robotic arm for remote payload manipulation.
- Engineered a multi-MCU architecture with 6 ultrasonic sensors and MPU-6050 IMU, utilizing WebSockets for low-latency telemetry streaming.

RoadCams: Campus AI Surveillance | *Python, YOLOv11, PaddleOCR, PostgreSQL, QGIS* *2024*

- Use Case:** Campus-wide vehicle tracking system to detect unauthorized entries, alert security, and map vehicle trajectories.
- Trained YOLOv11 models for 95%+ ANPR accuracy; implemented duplicate detection, blacklist alerts, and spatial visualization on QGIS.

AttendPro: Anti-Proxy Attendance | *Flutter, Node.js, MongoDB, HTML/CSS/JS* *2025*

- Use Case:** Cross-platform educational tool designed to eliminate proxy attendance fraud and automate faculty reporting workflows.
- Enforced attendance integrity via device fingerprinting and geo-fencing; built a REST API capable of handling 500+ concurrent users.

Inventory Management | *Next.js, PostgreSQL, Prisma, Node.js* *2025*

- Use Case:** Omnichannel retail solution unifying physical counter billing with a live-synced e-commerce storefront.
- Implemented real-time stock deductions, IP-based audit logging for security, rate limiting, and scheduled email report generation.