YOGESH KUMAR

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Career Objective

To work in an organization that provides opportunities to enhance my technical skills and domain knowledge while contributing to organizational growth. Strong interest in building real-world **IoT, embedded, and EV telemetry systems**, focusing on end-to-end solutions involving hardware integration, communication protocols, cloud connectivity, and real-time dashboards.

Work Experience

Jet Motorcycles – Bhopal, India
Graduate IoT Engineer Trainee May 2025 – Present

- Developed an IoT-based **EV Telemetry System** using ESP32 for real-time vehicle monitoring
- Collected and processed sensor data including battery temperature, motor temperature, GPS, humidity, and voltage
- Implemented **CAN communication** for high-speed data transfer to Raspberry Pi dashboard
- Published live telemetry data to a private **MQTT broker** for cloud visualization
- Integrated embedded firmware, dashboard UI, and cloud services into a unified system
- Performed real-time testing, debugging, and validation under live vehicle conditions

Technologies: ESP32, Raspberry Pi, CAN Bus, MQTT, SIM7600 (4G LTE), GPS, Linux
Protocols/Tools: CAN, MQTT, UART, SPI, I2C, HTTP, Linux

Jet Motorcycles – Bhopal, India
IoT Intern march 2024 – may 2025

- Worked with STM32, Arduino, and ESP32 microcontrollers
- Interfaced sensors using UART, SPI, I2C, and CAN protocols
- Implemented real-time data acquisition and inter-controller communication
- Assisted in embedded firmware testing and communication validation

Projects

EV Telemetry & Dashboard System

- Designed an end-to-end telemetry system for Electric Bikes
- ESP32-based data acquisition with CAN communication to Raspberry Pi dashboard
- MQTT-based cloud publishing over 4G LTE using SIM7600
- Live monitoring of speed, battery health, temperatures, voltage, and system status
- Achieved real-time synchronization between vehicle, dashboard, and mobile app

Smart Security System (Hindi-First IoT)

- Designed a real-world IoT security system for local shop owners
- Instant 12V siren activation and GSM-based automatic call alerts
- Hindi mobile application with live sensor data and trigger identification
- Sensor-fusion logic for reliable intrusion detection

Smart Home Automation System

- Full home appliance control via mobile and web applications
- ESP32 with Firebase Realtime Database integration
- Secure authentication and real-time cloud synchronization

Education

Bachelor of Technology (B.Tech) – Internet of Things
Sagar Institute of Science, Technology & Engineering, Ratibad, Bhopal
Rajiv Gandhi Proudyogiki Vishwavidyalaya 2021 – 2025
CGPA: **7.98 / 10**

Higher Secondary (12th – State Board)
Ambika Public Higher Secondary School, Bhopal 2021
Percentage: 81.40%

Secondary (10th – State Board)
Ambika Public Higher Secondary School, Bhopal 2019
Percentage: 81.80%

Technical Skills

Microcontrollers: ESP32, Arduino, STM32, Raspberry Pi
Protocols: MQTT, HTTP, CAN, UART, SPI, I2C
Programming: C, C++, Python, JavaScript
Cloud/Backend: Firebase, MQTT Brokers
Frontend/GUI: Qt/QML, HTML, CSS
Tools/IDEs: Arduino IDE, STM32CubeIDE, Qt Creator, Linux

Domain Interests

IoT & Telemetry Systems, Embedded Systems, EV Technology, OTA Systems, Dashboard & GUI Development

Achievements

- College Hackathon Winner
- Worked on live deployment-oriented IoT systems
- One year of industry experience in IoT development

Strengths

Problem solving, system-level thinking, hardware–software integration, real-time debugging, production-ready system design