

RUTIKA BHOI

Pune India 411 046 | 📞 +91-9356633900 | ✉️ bhoirutika@gmail.com

Professional Summary

Dedicated Embedded Developer with 2+ years of experience in real-time embedded systems, IOT product development, and microcontroller programming. Expertise in sensor integration, communication protocols, dashboard visualization, and embedded C programming. Skilled at delivering high-quality embedded solutions and collaborating across teams to solve real-world challenges.

Core Technical Skills

- **Languages & Programming:** C, Embedded C, C++, Python
- **Microcontrollers:** Atmega 328P, NodeMCU, ESP-32, Raspberry Pi Pico
- **Microprocessor:** Raspberry Pi
- **Hardware Interfacing:** Analog & Digital sensors, Motor Drivers, Touchscreen Displays, LCD, Relay and Actuators etc.
- **Technologies:** Lora, Wi-Fi, IOT
- **Communication Protocols:** UART, SPI, I2C
- **Software Tools:** Arduino IDE, VS code, Pycharm
- **Circuit Design on:** Proteus, Fritzing

Professional Experience

TechEureka Solutions & Services, Pune

Embedded Developer | Apr 2024 – Present

Project Name	Technologies Used	Description
Real-Time Vending Machine	Raspberry pi, Sensors, Motors, HTML	Developed an intelligent vending system to automate product dispensing through embedded sensor control.
Access Control Using Dual Authentication	Raspberry Pi, Fingerprint Sensor, Camera	Built a dual-layer security system integrating fingerprint verification and facial recognition using Raspberry Pi.
Health Monitoring System	NodeMCU, Atmega328P, Sensors, webpages	Designed a health monitoring solution with live dashboard visualization of vitals like temperature, pulse rate, and humidity.

KalpTech Technologies, Pune

Embedded Intern | May 2023 – March 2024

Project Name	Technologies Used	Description
Voice Operated Home Automation	Arduino Uno, Voice Module, Relays	Developed a voice-activated control system for home appliances using embedded voice recognition technology.
IoT-Based Garbage Monitoring System with Live Dashboard	NodeMCU, Ultrasonic Sensor, MQ Gas Sensor, Thingspeak	Designed a smart garbage monitoring system showing real-time waste levels and gas leakage alerts on a mobile app.
Socket Communication using Raspberry Pi	Raspberry Pi, Python	Implemented a socket-based communication system enabling device-to-device data transfer over LAN.
Smart Car Parking System	NodeMCU, Ultrasonic Sensor, Virtuino App	Built a parking management system for real-time monitoring of parking slot availability with live data updates.

Academic Projects

1. KissanBot – Smart Agriculture Robot

Hardware and software used :: Raspberry pi, Soil moisture Sensor, LDR, Solar Panel, Touchscreen, Camera

Developed Solar operated three wheeler with Raspberry Pi-based system with a touchscreen GUI for monitoring water levels and controlling sprinklers.

2. Dam Health Monitoring System

Hardware and software used :: Microcontroller, Water Level Sensor, Temperature sensor, Rainfall Sensor, Buzzer

Built a real-time dam health monitoring system tracking water levels, temperature and rain fall with alert notifications.

3. Smart Shopping Trolley

Hardware and software used :: NodeMCU, EM18 RFID Reader, ESP Web Server

Developed a smart trolley that detects price of products using RFID tags and shows the bill on a live web interface.

Education

• BTech – Electronics & Telecommunication Engineering

Dr. Babasaheb Ambedkar Technological University, Maharashtra, India

Year of Passing: 2024 (CGPA 7.31)

• HSC – Higher Secondary Certificate

Kolhapur University, Maharashtra, India

Year of Passing: 2020 (Percentage 64.67)

• SSC – Secondary School Certificate

Kolhapur University, Maharashtra, India

Year of Passing: 2018 (Percentage 79)