

DHANANJAY PRAKASH WAKADE

Embedded Engineer and AI-Developer Firmware Engineer | 2 Years | Pune, Maharashtra.

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PROFESSIONAL SUMMARY

Embedded Systems Engineer with hands-on experience in firmware development, industrial automation, robotics, and IoT-based solutions. Proficient in Embedded C, Python, STM32, PIC microcontrollers, and industrial communication protocols. Experienced in developing encoder-based control logic, vision-based inspection systems, and end-to-end embedded product development from concept to deployment. Seeking to contribute technical expertise and problem-solving skills to Khande Green Tech Pvt. Ltd.

Core Skills: Embedded C, Python, Object-Oriented Programming (OOP), Firmware Development, FreeRTOS, Roboflow, Microcontrollers, IoT Systems, Industrial Automation, Vision Inspection Systems, Encoder-Based Control, Linux, Debugging, AI Tools, RTOS (basic / exposure), Firmware Debugging, Embedded Linux (basic), Hardware–Software Integration

TECHNICAL SKILLS

Programming Languages	:	C, Embedded C, C++, Python
Embedded Platforms	:	PIC18, LPC2148, STM32, Arduino Mega2560, Raspberry Pi
Communication Protocols	:	UART, I2C, SPI, CAN, Modbus, MQTT
Embedded & IDE Tools	:	Keil IDE, MPLAB, STM32CubeIDE, Proteus
Tools used	:	RTOS+OpenOCD, VS Code, SSMS,
Technology used	:	Machine Learning, Deep Learning, Jupyter Notebook, Cloud based AI
IoT & Networking	:	ESP8266, NodeMCU, NPK-7 pin, Sensors, Cloud-based UI

PROFESSIONAL EXPERIENCE

Project: AI-Based Agri-Wheels

- Developed an AI-enabled multi-purpose agricultural vehicle for smart farming applications.
- Implemented embedded control systems for automation, monitoring, and data collection.
- Utilized Arduino Uno, Raspberry Pi, Embedded C, and Python for system development.
- As an Embedded AI Developer at Khande Greentech Pvt. Ltd., I develop and deploy AI-driven embedded systems for agriculture and Agri-EV technologies. I specialize in implementing AI/ML models on resource-constrained hardware, designing IoT firmware and system architectures, and optimizing algorithms for real-time, low-power performance. I work closely with cross-functional teams to deliver intelligent, sustainable, and data-driven solutions that enhance automation and support the future of green technology.

Propix Technologies Pvt. Ltd., Pune

Trainee Embedded Software Engineer

May 2025 – Oct 2025

Project: Track and Trace Inspection System

- Developed encoder-based embedded control logic to synchronize inspection events with product movement on manufacturing lines.
- Implemented precise camera triggering mechanisms, improving inspection accuracy and reducing false rejections.
- Designed firmware logic for automated rejection of defective products based on inspection results.

- Configured industrial cameras and developed vision job files for inspection, measurement, and code validation.
- Optimized system performance to ensure consistent throughput and reliable operation in production environments.

Project: IoT-Based Home Security System

- Designed a password-based home security system using PIC18F4580 and LPC2148 microcontrollers.
- Implemented IoT functionality for remote monitoring and secure access control.

Tools and Technology used : Machine Learning, Deep Learning, Python, Jupyter Notebook, Cloud based AI.

Leverage Net Solutions Pvt. Ltd., Pune

Embedded Engineer

June 2024 – April 2025

Project: Bhuhit – Autonomous Agricultural Robot

- Designed and developed an autonomous agricultural robot for sowing, spraying, grass cutting, and field monitoring.
 - Implemented embedded control logic using Embedded C and Python.
 - Integrated Arduino Mega2560, Raspberry Pi, sensors, and cloud-based UI.
 - Enabled autonomous, remote, and cloud-controlled operation modes.
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EDUCATION

Bachelor of Technology (B.Tech) – Electronics and Telecommunication Engineering

CSMSS Chh. Shahu College of Engineering, DBATU Lonere

2019 – 2023 | CGPA: 7.64

CERTIFICATIONS & COURSES

- Advanced Career Track in Embedded Systems – Techno Scripts Institute, Pune (2023–2024)
 - Digital Circuits – NPTEL
 - Internet of Things (IoT) – NPTEL
 - AWS Cloud Training – Google & Honeywell
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ADDITIONAL TRAINING

- One-month industry internship at Deltiin India Tech Pvt. Ltd. focusing on C programming and industry-oriented skills