Om Jalindar Barvekar

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SUMMARY

Motivated and detail-oriented **AI & Robotics Engineer** with hands-on experience in developing intelligent automation systems, machine learning models, and IoT-driven robotics solutions. Proficient in integrating **computer vision, sensor data, and path planning algorithms** to create smart autonomous systems. Certified by **EDC–IIT Delhi** in AI Tools, Data Analytics, and Product Management, with strong problem-solving and product development skills. Skilled in working with **Raspberry Pi, Jetson Nano, and embedded systems** to bridge software and hardware automation. Passionate about building innovative AI-based solutions that solve real-world challenges through data-driven decision-making and intelligent design.

WORK EXPERIENCE

Intern – Labmantics (AI/ML, Remote)   June 2025 - present

Developed and automated machine learning models for data-driven insights and predictive analytics. Worked on AI algorithms to enhance model efficiency and data accuracy. Gained hands-on experience in data preprocessing, model evaluation, and automation workflows.

Intern – Blackbug Solutions Pvt. Ltd., Pune   Mar 2023 - Jan 2024

– Assisted in developing drone automation modules and integrating embedded systems with sensor networks.
– Collaborated with engineers on testing and debugging IoT-based control systems.
  Strengthened understanding of hardware–software integration and robotics system design.

PROJECTS

AI-Based Autonomous Navigation System   Link to Demo

Technologies: Python, OpenCV, TensorFlow, YOLO, Raspberry Pi, Ultrasonic Sensor

Developed an AI-powered robot navigation system capable of real-time object detection and autonomous path planning. Integrated YOLO for obstacle detection and A* algorithm for route optimization. Deployed on Raspberry Pi / Jetson Nano with motor and sensor integration.

Real-Time Vehicular Accident Detection & Emergency Response System   Link to Demo

Technologies: Python, Machine Learning, GSM/GPS, IoT Sensors

Designed and implemented an AI-based accident detection model using sensors and GSM/GPS modules. Automated real-time alert notifications and location tracking for emergency response.

Vybe Ride — JavaFX Ride-Sharing Application   Link to Demo

Technologies: Java, JavaFX, MySQL

Developed a desktop-based ride-sharing app prototype with authentication, ride selection, and booking modules. Focused on creating an interactive UI and efficient data flow using JavaFX. Integrated database connectivity for user and ride management.

Portfolio Website   Live Demo

Technologies: HTML, CSS, JavaScript, React, Vercel

Created and deployed a responsive personal portfolio to showcase projects, achievements, and technical skills. Integrated GitHub, LinkedIn, and project previews in a clean and mobile-friendly layout.

Education

2022 - Present	Bachelor's Degree in at **Pune District Education Association COEM**	(GPA: 7.5.0/10.0)
2022	Class 12th HSC Board	75%
2021	Class 10th SSC Board	91.80%

Achievements and Certifications

2024	Certified by **EDC–IIT Delhi** in Artificial Intelligence Tools, Data Analytics, Product Management, and Prompt Engineering.
2024	Received a **Letter of Recommendation (EDC–IIT Delhi)** for excellence in AI-based research and product development.
2023	Completed **"AI is the Future"** and **"Self-Made Millionaire Program"** certifications.
2023	Recognized for **leadership and teamwork** in developing AI-driven automation projects and IoT systems.
2022	Participated in multiple **tech workshops and hackathons** focusing on Robotics, AI, and ML automation.

Technical Skills

Programming Languages	Python, Java, C, JavaScript
AI and Machine Learning	OpenCV, TensorFlow, YOLO, Scikit-learn
Frameworks and Libraries	Flask, Node.js, React
Embedded Systems and Hardware	Raspberry Pi, Jetson Nano, Arduino
Databases	MySQL, Firebase
Developer Tools and Platforms	Git, Linux, VS Code, AWS (Basic)
Soft Skills	Problem Solving, Team Collaboration, Product Management, Communication