


# Om Jalindar Barvekar

 jayaschool1981-rgb

 om-barvekar

 Portfolio

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## Professional Summary

Highly motivated and detail-oriented **AI & Full-Stack Software Engineer** with hands-on experience in developing **dynamic, secure, and scalable applications**. Skilled in **Python, Java, JavaScript, React, Node.js, and MongoDB**. Adept at integrating **AI models, RESTful APIs, IoT sensors, and cloud services** to deliver real-world solutions. Certified by **EDC-IIT Delhi** in Artificial Intelligence Tools and Data Analytics. Passionate about transforming intelligent automation ideas into deployable products.

## Core Technical Skills

|                        |  |
|------------------------|--|
| <b>Languages:</b>      | Python, Java, C, JavaScript (ES6+), SQL, HTML5, CSS3   |
| <b>Frontend:</b>       | React, Tailwind CSS, Vite, Responsive Design, Form Validation  |
| <b>Backend / APIs:</b> | Node.js (Express), Flask, RESTful API Design, <b>JWT Authentication</b> , Middleware, Error Handling |
| <b>Databases:</b>      | MongoDB, MySQL, Mongoose ORM, Schema Design, Aggregation Pipelines                                   |
| <b>DevOps / Cloud:</b> | Docker, GitHub Actions (CI/CD), <b>AWS EC2</b> , Render, Vercel, Postman, Swagger                    |
| <b>AI / ML:</b>        | TensorFlow, OpenCV, Scikit-learn, YOLOv5, A* Algorithm, Model Deployment (Flask/FastAPI)             |
| <b>IoT / Embedded:</b> | Raspberry Pi, Arduino, Jetson Nano, GSM, GPS   |
| <b>Tools &amp; OS:</b> | IntelliJ IDEA, VS Code, Linux, Git, NPM, Maven   |
| <b>Soft Skills:</b>    | Leadership, Collaboration, Agile Development, Problem Solving, Product Thinking                      |

## Major Projects

### 1. Dynamic Portfolio Website (Deployed & Authenticated)

[GitHub](#)

*React, Node.js, Express, MongoDB, Tailwind CSS, JWT Authentication, Vercel, Render*

Developed and deployed a fully **dynamic, secure portfolio platform** with **user authentication, MongoDB Atlas integration, and protected routes**. Implemented **JWT + bcrypt-based login/register system**, RESTful backend API, and modular React frontend built with Vite. Configured **Docker-based deployment** and CI/CD workflows through GitHub Actions. **Outcome:** Improved page performance by 40% and enhanced backend security using token validation middleware.

### 2. Vybe Ride — JavaFX Ride-Sharing Application

[GitHub](#)

*Java, JavaFX, MySQL, JDBC, Maven, MVC Architecture*

Built a feature-rich ride-sharing desktop app with login/signup, real-time data validation, and seamless navigation. Applied **MVC design pattern** for maintainability and integrated MySQL with JDBC for persistence.

### 3. AI-Based Autonomous Navigation System

[GitHub](#)

*Python, OpenCV, TensorFlow, YOLOv5, Raspberry Pi*

Created an AI-powered robot using **real-time object detection and path planning**. Integrated live camera feeds and ultrasonic sensors for dynamic obstacle avoidance. **Outcome:** Achieved 95% accuracy in object detection and autonomous navigation.

### 4. Real-Time Vehicular Accident Detection & Emergency Response System

[GitHub](#)

*Python, ML, IoT Sensors, GSM/GPS, Flask*

Engineered an ML-driven crash detection model to trigger emergency notifications via GSM and GPS modules. Deployed backend services on Flask to manage alert data, reducing response latency by 50%.

### 5. AI-Driven Automation Projects (Research + Integration)

*TensorFlow, OpenCV, Raspberry Pi, Arduino*

Contributed to multiple prototypes under EDC-IIT Delhi mentorship, integrating computer vision, ML inference, and automation pipelines.

## Professional Experience

### AI/ML Intern — Labmantics (Remote)

Jun 2025 – Present

*Python, Pandas, TensorFlow, Data Visualization*

Developed ML-based data pipelines for preprocessing and predictive analytics. Implemented automation scripts for model evaluation and **feature optimization**, achieving measurable performance improvement.

### IoT & Automation Intern — Blackbug Solutions Pvt. Ltd., Pune

Mar 2023 – Jan 2024

Collaborated in building **drone automation** systems and IoT sensor networks. Assisted in testing embedded modules and integrating telemetry data with backend systems.

# Education

|  |                |
|--|----------------|
| <b>Bachelor of Engineering in Computer Engineering</b> — PDEA College of Engineering, Pune | 2022 – Present |
| GPA: 7.5 / 10.0  |                |
| <b>Higher Secondary (HSC)</b> — 75%  | 2022           |
| <b>Secondary (SSC)</b> — 91.8%   | 2020           |

# Certifications & Achievements

- Certified by **EDC–IIT Delhi** in Artificial Intelligence Tools, Data Analytics, and Product Management.
- Awarded **Letter of Recommendation (EDC–IIT Delhi)** for outstanding AI-based research contribution.
- Recognized for **leadership, innovation, and teamwork** in AI-driven automation systems.
- Completed advanced programs — "*AI is the Future*" and "*Self-Made Millionaire*" initiative.

# Additional Information

- GitHub: <https://github.com/jayaschool1981-rgb>
- Portfolio: <https://om-barvekar-portfolio.vercel.app/>
- Familiar with **Agile workflows**, Git branching, issue tracking, and collaborative development.
- Interested in roles involving **Full-Stack Development, AI/ML Engineering, IoT Systems, and Product Engineering**.