# Omkar Deshmukh

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#### **EDUCATION**

#### Pune Institute of Computer Technology

Bachelor of Engineering in Computer Engineering

• SCGPA - 9.26

## RMD Sinhgad College

completed 12th grade

- Overall 94.4%
- PCM 95.6 %

#### **Podar International School**

Completed 10th grade

• Overall - 98.8 %

Pune, Maharashtra

Pune, Maharashtra Nov. 2022 – Jun. 2026

Pune, Maharashtra

Aug. 2020 - May 2022

Aug. 2010 - May 2020

### About Me

I am a proficient web developer and an AI/ML developer who likes to keep up with new technologies and learn new things. I am also very competitive and like to solve coding problems frequently.

#### TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, HTML/CSS

Frameworks: React, Node.js, Tailwind

Developer Tools: Git, GitHub, Eclipse, VS Code, PyCharm, Vercel, Streamlit

Libraries: Express, ZOD, JWT, Recoil, Mongoose, Sequelize, FAISS, LangChain, LangGraph, Crew AI

Databases: MongoDB, Postgres

Technologies: Conventional ML Models, Retrieval-Augmented Generation (RAG), Large Language Models (LLMs), AI

Agent Development

#### CODING PLATFORM PROFILE

**Leetcode** | Rating 1711 | Profile

• Completed 340+ questions

CodeChef | Rating 1618 | Profile

• 3 star

#### EXPERIENCE

## Founding AI Engineer

Alspire Labs

Jan 2025 – Present

Bangalore

- Lead the development of enterprise-grade conversational AI solutions and automation workflows
- Key Contributions:
  - \* Developing intelligent chatbot systems leveraging large language models for enhanced enterprise communication
  - \* Designing and implementing autonomous workflow solutions for streamlining business processes and improving operational efficiency

#### **Backend Engineer**

TechnoGrowth Software Solutions Pvt. Ltd

May 2024 – Aug 2024 Pune, MH

• Project Overview: Led backend development for Taht-Talbak, an integrated mobility platform combining ride-hailing and logistics services for the Kuwait market, serving as a unified solution similar to Uber, Porter, and Zoomcar.

• Key Contributions::

- \* Engineered scalable REST APIs and WebSocket infrastructure for real-time user-driver matching, order dispatching, and live status updates.
- \* Implemented comprehensive location services using Mapbox API, including dynamic zone management and geocoding functionality, enabling precise tracking and optimized service coverage across Kuwait
- Tech Stack: Node.js, Express.js, MongoDB, Mapbox API, WebSocket, REST APIs, Git

## WEB + AI/ML Projects

LogSentry | Random Forest, XGBoost, LLaMA 3.1 (8.1B params), React, Node, flask | Deployed (Github)

- **Project Overview:** Developed an automated error log categorization system that classifies logs into critical, non-critical, and warning levels, providing real-time insights into system health.
- **Key Functionality:** The system continuously monitors a specified error log file path, updating classifications in real-time as new logs are generated.
- Utilized machine learning models, including Random Forest and XGBoost, for high accuracy in classifying error logs.
- Implemented troubleshooting pages for each error type, enhanced by LLaMA 3.1 (8.1B parameters) to provide contextual solutions and guidance for efficient issue resolution.

## AI/ML PROJECTS

AI Agentic Search Engine | Langchain, langGraph, Serper, Scraper | Deployed (Github)

- **Project Overview:** Developed an Agentic search engine leveraging Langgraph to build a multi-node workflow, enabling efficient data retrieval and processing.
- **Key Functionality:** Integrated multiple nodes including Planner, Selector, Reporter, Reviewer, Router, and FinalReport to streamline the data-fetching and reporting process.
- The system leverages Serper and Scraper to fetch data from the internet, providing concise and accurate output through the power of large language models (LLMs).

Autonomous Code Review Agent System | FastAPI, Celery, Redis, AI Agents | (Github)

- **Project Overview:** Built an AI-powered system to automate GitHub pull request reviews using autonomous agents, providing structured feedback asynchronously via a REST API.
- **Key Functionality:** Integrated FastAPI for API management, Celery for asynchronous task handling, and Redis for efficient task state management.
- The system utilizes advanced LLM models to analyze code across multiple languages, identifying issues such as style violations, potential bugs, and performance improvements.
- Architecture Highlights: Composed of FastAPI, Celery workers, AI agents, and GitHub integration for seamless pull request analysis and result retrieval.

EduPlus Chatbot | Langchain, FAISS, LLaMA 3.1 (70B params), Streamlit | Deployed Github

- **Project Overview:** Developed an advanced chatbot designed to assist students with inquiries related to EduPlus ERP software, enhancing their user experience and accessibility.
- **Key Functionality:** Implemented a Retrieval-Augmented Generation (RAG) architecture, leveraging FAISS for efficient vector-based search and context retrieval, combined with LLaMA 3.1 (70B) for generating accurate and contextual responses.

#### WEB PROJECTS

TechMart | React, Node, Express, OAuth, MongoDB | Deployed Github

- **Project Overview:** Developed a website where users can buy and sell electronics, providing a seamless platform for transactions and user management.
- **Key Functionality:** Implemented OAuth (Google Sign-in) for authentication alongside traditional username/password authentication. Enabled users to create, manage, and edit ads, and update their personal information.

Internship Details Management System | MySQL, Express, Node, React, Zod |

• **Project Overview:** Developed a comprehensive management system for a college to efficiently handle and manage students' internship details.

- Key Functionality: Designed and implemented a custom query handler for versatile database queries, enabling the system to support various data retrieval needs. Configured data ingestion from Excel files and student inputs, allowing for customized report generation based on college-specific requirements.
- Additional Details: Deployed the frontend on Vercel for easy access, while hosting the backend on college infrastructure for seamless integration.

#### Volunteering

Member at PICT MUN

Jan 2023 – Sept 2023

 $Team\ Marketing$ 

Member at PICT EDC Sep. 2023 – Feb 2024

Team Publicity and Operations

Member at PICT IEEE Jan 2023 – Present

Technical Team

ACHIEVEMENTS

**Hackathons**: Finalist in COEP Hackathon