

Vijay Takbhate

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TECHNICAL SKILLS

Programming & Backend: Python, Flask, SQL (MySQL), REST APIs

Generative AI & LLMs: LangChain, LLM Orchestration, Retrieval-Augmented Generation (RAG), Prompt Engineering, GPT Models (GPT-3.5, GPT-4)

Embeddings & Vector Databases: all-MiniLM-L6-v2, ChromaDB, Semantic Search, Chunking Strategies

MLOps & DevOps: MLflow, DVC, DAGsHub, Docker, GitHub Actions (CI/CD)

Data & Analytics: Databricks, Metabase

Cloud & Deployment: AWS EC2, AWS Lambda

EXPERIENCE

InCred Financial Services

Dec 2024 – Present

Mumbai, Maharashtra

Risk Analyst (MLOps & Data Engineering Focus)

- Led policy design and deployment within the **Business Rule Engine (BRE)** production system, ensuring compliance and seamless integration with risk workflows.
- Developed a custom Python package, **Simulator**, to validate policy implementation—cutting verification time by **30%** and reducing code complexity by **50%**.
- Implemented **CI/CD pipelines** using **GitHub Actions** for automated builds, testing, and deployment of Simulator and policy updates into production.
- **Skills:** Python, GitHub Actions (CI/CD), Databricks, Metabase, SQL, Git, Excel

Fox Solutions Pvt. Ltd.

Feb 2024 – Oct 2024

Automation Engineer (Intern → Full-time)

Pune & Nashik, Maharashtra

- Developed and deployed robust **automation pipelines** to enhance reproducibility, monitoring, and reduce manual intervention across production lines.
- Applied **reliability engineering, version control, and system monitoring** practices to ensure stable and scalable automation systems.
- **Skills:** Pipeline Automation, Monitoring Systems, Version Control, PLC/SCADA Tools

PROJECTS

AI-Powered Portfolio & Resume Assistant for HR (RAG-based)

Oct 2025 - Present

- Built an **AI-enabled portfolio platform** allowing recruiters to conduct **virtual HR interviews** via an interactive chatbot powered by **LangChain** and **GPT-5-mini**.
- Enhanced the chatbot backend using **Retrieval-Augmented Generation (RAG)** to answer recruiter queries grounded in **resume content and GitHub project documentation**.
- Converted all GitHub project **README files into PDFs**, generated embeddings using **all-MiniLM-L6-v2**, and stored them in **ChromaDB** for semantic retrieval.
- Implemented a retrieval pipeline that fetches the **top-5 relevant context chunks**, enabling the LLM to generate **accurate, hallucination-reduced responses** about skills and projects.
- Deployed the application using **Flask, Docker, and AWS EC2**, integrated **MLflow** for experiment tracking, and automated workflows via **GitHub Actions (CI/CD)**.

- **Tech Stack:** Python, Flask, LangChain, RAG, GPT-5-mini, ChromaDB, all-MiniLM-L6-v2, MLflow, Docker, AWS EC2
- **Live Demo:** [Portfolio Demo](#) — **GitHub:** [Repository](#)

Medical Insurance Cost Prediction (SVR Model)

Sep 2025

- Built an **SVR-based regression model** achieving **R²: 0.86** and **MAE: 0.034** for medical cost prediction.
- Developed a **Flask web application**, containerized with **Docker**, and deployed on **AWS EC2**.
- Implemented key **MLOps components** including **MLflow tracking**, automated CI/CD pipelines, and **Kubeflow** integration.
- **Tech Stack:** Python, Flask, Docker, MLflow, Kubeflow, AWS EC2
- **GitHub:** [Repository](#)

CERTIFICATIONS

Complete MLOps Bootcamp with 10+ Projects

Udemy — July 2025

- Applied course learnings to build **end-to-end MLOps pipelines** (CI/CD, experiment tracking, deployment), e.g., [Insurance Cost Prediction](#).

MLOps Bootcamp: Mastering AI Operations

Udemy — Jun 2024

- Implemented the **MLOps lifecycle** using Flask + MLflow, deploying ML models, e.g., [Loan Eligibility Prediction](#).

EDUCATION

SVERI's College of Engineering

Bachelor of Technology & Diploma in Electronics and Telecommunication

Pandharpur, Maharashtra

Graduated: May 2024 & May 2021

- Completed **B.Tech.** with **81.71%** and **Diploma** with **91.73%**.
- Focused on electronics, signal processing, and communication systems, applied in AI/ML and data-driven projects
- Engaged in hands-on projects bridging electronics with AI, machine learning, and software deployment.

BLOGGING

Supervised, Unsupervised, & Beyond: ML Techniques Simplified

LinkedIn Article

- Simplified core ML paradigms (supervised, unsupervised, semi-supervised, online/offline learning) with real-world examples.
- Used relatable cases like spam filtering, clustering, and pseudo-labeling to make ML accessible for beginners.

Comprehensive Docker Guide

Containerizing Flask Applications

- Published a hands-on guide covering Docker fundamentals (Dockerfile, images, containers) for ML practitioners.
- Demonstrated containerizing and deploying Flask ML apps, with practical steps for building, running, and scaling.

LANGUAGES

English

Marathi

Hindi

SOFT SKILLS

Critical Thinking

Intellectual Rigor

Problem Solving

Understanding Business Needs