

Anant Patankar

Senior Data Science & AI Engineer | Generative AI Practitioner | MLOps Engineer

E-Mail: patankar.anant123@gmail.com || Phone: +91-9834881001

LinkedIn URL: <https://www.linkedin.com/in/anant-patankar/>

Website: <https://anantpatankar.com/>

Location: Bangalore (Open to Kolkata, Pune, Hyderabad, Bangalore, Chennai | Remote/Hybrid)

Available to join from June 21st, 2025

PROFILE SUMMARY

Senior AI Engineer specializing in production GenAI systems (RAG, LLMs, multi-agent architectures) with 4.5+ years across finance, manufacturing, and healthcare. Led enterprise AI initiatives delivering 40% efficiency improvements and 22% accuracy gains. Expert in Azure/AWS MLOps, cross-functional team leadership, and translating business requirements into scalable AI solutions.

TECHNICAL SKILLS:

- **AI/ML:** PyTorch, TensorFlow, scikit-learn, Hugging Face Transformers, OpenCV, YOLO, Model Optimization (Quantization, Pruning, GPU Acceleration, Edge Deployment)
- **Generative AI:** LLM Orchestration (LangChain, LlamaIndex), RAG, OpenAI API, Azure OpenAI, Fine-tuning (Llama, GPT), Vector Databases (FAISS, HNSWLib, Elasticsearch)
- **MLOps & Cloud:** Docker, Kubernetes, CI/CD, MLflow, Kubeflow, SageMaker, AWS, Azure ML, GCP, FastAPI/Flask, A/B Testing
- **Data Engineering:** PySpark, SQL, Airflow, Distributed Training, Model Serving (TorchServe, Triton)

PROFESSIONAL EXPERIENCE

Affine Analytics Pvt. Ltd., Hyderabad, Telangana

Senior Associate Data Scientist (July 2024-Present)

Associate Data Scientist (June 2022-June 2024)

Led cross-functional teams in developing and deploying AI solutions across diverse business domains, with focus on Generative AI, prompt engineering, and secure AI systems.

- **Project 1: AI-Powered Code Analysis & Agentic Transformation System**
 - Designed multi-agent architecture (Orchestrator/Code Analyzer/Security Auditor) using Azure AI Studio's prompt flows and Azure OpenAI function calling
 - Implemented self-correcting workflows with context persistence in Azure Cosmos DB and event-driven scaling via Azure Event Grid
 - Deployed scalable agent containers on Azure Kubernetes Service (AKS) with auto-scaling based on code complexity
 - Achieved 40% faster code resolution through parallel agent execution
 - **Technologies:** Azure OpenAI (GPT-4-turbo), Azure AI Studio, AKS, Cosmos DB, Event Grid, LangChain Agents, FastAPI, Semantic Kernel, Azure AI Foundry, Azure Functions, Docker, Azure CosmosDB, Azure Container Apps
- **Project 2: Enterprise Knowledge System (RAG-based Q&A)**
 - Architected production-grade Retrieval Augmented Generation (RAG) system combining vector embeddings with LLM-powered response generation
 - Implemented advanced prompt engineering techniques, improving response quality while reducing token consumption by 20%
 - Designed security measures preventing prompt injection attacks and ensuring data privacy compliance
 - Created end-to-end MLOps pipeline with monitoring dashboards tracking latency, relevance scores, and user engagement
 - **Technologies:** OpenAI API, LangChain, LlamaIndex, FAISS, Docker, FastAPI, CI/CD, Python
- **Project 3: Indian Rural Development Bank - AI/ML Transformation (30+ Use Cases)**
 - Led enterprise-wide AI implementation delivering **30+ ML** solutions across EDA, forecasting, NLP, and computer vision, boosting credit risk prediction by 22%
 - Developed financial NLP search engine using Elasticsearch with custom query expansion, achieving 90% retrieval accuracy
 - Operationalized models using MLFlow with 95% reproducibility and built real-time PySpark ETL pipelines for risk monitoring

- **Technologies:** Python, PySpark, MLFlow, Elasticsearch, Ray.io, Vertica SQL, Power BI
- **Project 4: AI-Powered Computer Vision Quality Control System**
 - Developed YOLOv8-based defect detection system achieving **96.2% mAP@0.5** with **<5ms inference time**, reducing defect escape rate by **35%**
 - Optimized for edge deployment via **TensorRT** quantization on **NVIDIA Jetson AGX Orin**, eliminating 120+ hours/month of manual inspection
 - Built CI/CD pipeline with zero-downtime updates, integrated with PLC systems processing 500+ parts/minute
 - **Technologies:** YOLO (v8), PyTorch, TensorFlow, OpenCV, AWS S3, Docker, TensorRT, FastAPI

RPDS Innovations Pvt. Ltd., Pune, Maharashtra

Junior Data Scientist (Mar 2021-May 2022)

Data Science Intern (Jan 2021-Mar 2021)

- **Project: AI-Driven Agrochemical Reactor Optimization**
 - Increased production yield by **1.2%** using **hybrid SARIMA-LSTM** models with real-time PLC integration, reducing feedstock waste by **12%**
 - **Technologies:** Python, scikit-learn, TensorFlow, OPC-UA, Tableau

MISCOS Technologies Private Limited, Pune, Maharashtra

Python Developer (Aug 2019-Feb 2020)

- **Project 1: AI-Driven Demand Forecasting for Ayurvedic Products**
 - Developed multi-source LSTM forecasting engine achieving 92% accuracy for 20+ seasonal products, reducing stockouts by 30%
 - **Technologies:** Python (TensorFlow), LSTM, ARIMA, Tableau, PostgreSQL
- **Project 2: Automated License Plate Recognition (ALPR) System**
 - Built real-time ALPR (Automated License Plate Recognition) system using TensorFlow Object Detection API with 94.7% accuracy and <200ms latency for automated parking management
 - **Technologies:** Python, TensorFlow (Object Detection API), OpenCV, Flask, ONNX Runtime

PERSONAL PROJECTS

- **Project: RAG Study Assistant**
GitHub: https://github.com/anant-patankar/rag_study_assistant
 - Built production-ready RAG pipeline processing 10+ document types (PDF, EPUB, DOCX, CSV, JSON) with intelligent chunking strategies and structure-aware parsing
 - Implemented hybrid search combining dense vectors with sparse representations, enhanced by Maximum Marginal Relevance (MMR) and cross-encoder reranking for optimal retrieval accuracy
 - Deployed with local LLM integration (Ollama), configurable embedding models, and comprehensive caching system for scalable performance
 - **Technologies:** Python, FAISS, HNSWLib, Sentence-Transformers, Ollama, SQLite

EDUCATION

- **M.Sc. Forensic Science (2017)** |
Dr. Hari Singh Gour Central University, Sagar
- **B.Sc. Forensic Science (2015)**
Government Institute of Forensic Science, Aurangabad, Maharashtra

AWARDS

Game Changer of the Month (December 2023)

- Recognized for developing an **innovative credit forecasting system** that improved accuracy by 22%

Game Changer of the Month (September 2023)

- Honored for **exceptional contributions** to the Enterprise Knowledge Q&A Chatbot, enhancing retrieval precision by 30%

SOCIAL ENGAGEMENT

- Volunteered with local NGOs for rural development programs, improving access to education for 100+ children.
- Visited an orphanage near the Pune city area to help orphan children.

LANGUAGES

Languages English, Marathi & Hindi