






DHARMAGNA VYAS

AI Engineer (Antian Advanced Technologies)

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AI Engineer with 2+ years of hands-on experience developing scalable NLP systems using LLMs, Retrieval-Augmented Generation (RAG), and real-time vector search. Specialized in fine-tuning models like GPT, LLaMA, and Mistral with LoRA and PEFT for custom enterprise use cases. Proven track record of building and deploying production-grade RAG pipelines, multilingual assistants, OCR-based document Q&A systems, and full-stack GenAI applications. Passionate about using language models and retrieval systems to solve real-world product problems.

EDUCATION

MSc. Artificial Intelligence Liverpool John Moores University | 2024-2026 Liverpool, England

PGD in Machine Learning and Artificial Intelligence

International Institute of Information Technology, Bangalore | 2024-2025 Bengaluru, Karnataka

B.Tech. Computer Science

ICT Ganpat University | 2021-2024 Ahmedabad, Gujarat

Specialization: Big Data Analysis

CGPA: 8.05

Diploma in Information Technology

Government Polytechnic For Girls | 2018 - 2021 Ahmedabad, Gujarat

CGPA: 9.44

PROFESSIONAL EXPERIENCE

Antian Advanced Technologies (April 2024 - Present) **ELearners 365 (September 2023 - April 2024)**

Artificial Intelligence Engineer

- Fine-tuned Meta-LLaMA 3.1-8B using LoRA (Unsloth) on attention projection layers; integrated expert routing logic and evaluated on over 300 domain prompts.

- Designed and deployed a scalable RAG-based chatbot using LangChain, OpenAI, FAISS, and Mistral OCR to chat with 1000+ scanned PDFs.

- Created multilingual voice+chat AI assistant (Buddy) in Hindi, Telugu, English using Whisper, ElevenLabs, and GPT/Mistral; included real-time web search.

- Developed text-to-3D pipeline for jewelry modeling via Tripo3D + OpenAI, exportable to Blender.

- Automated web security scans with ZAP/Burp and GPT, generating natural-language audit reports.

- Developed SeaBuddy, a mental wellness bot with journaling and MBTI-based prompts.

Artificial Intelligence and Machine Learning Intern

- Improved CV model accuracy by 35% through GAN-based synthetic data generation.

- Built NLP solutions using NLTK, Spacy, and OpenAI APIs.

- Deployed ML models using Scikit-learn and Python.

- Enhanced decision-making accuracy by 25% through data analysis.

- Developed ML models with 90% prediction accuracy.

- Created visualizations and statistical analyses for stakeholder presentations.

KEY PROJECTS

Multilingual AI Assistant – BuddyAI

- Developed a real-time voice+chat AI assistant supporting Hindi, Telugu, and English.
- Integrated Smallest.ai, Mistral/GPT, and Google Search for hybrid assistant flow.
- Built APIs for multilingual transcription, semantic search, and intent detection.
- Technologies: Python, OpenAI, Mistral, FastAPI, Streamlit, Smallest.ai

LLM Fine-tuning & Expert Routing

- Fine-tuned Meta-LLaMA 3.1-8B using LoRA (Unsloth) on attention projection layers.
- Built prompt-routing system to dynamically select model branches for domain-specific queries.
- Evaluated with 300+ prompts across domains like legal, finance, and medical.
- Technologies: PyTorch, Transformers, LoRA, Mistral, HF Accelerate.

SeaBuddy Maritime Platform

- Developed AI-powered maritime support platform with mental health assistance
- Implemented MBTI analysis system with 90% crew compatibility accuracy.
- Created a comprehensive mental health tracking and support system.
- Technologies: Python, PostgreSQL, Azure OpenAI, Streamlit, FastAPI

Vexoo Cognitive Search Engine

- Built a conversational search engine with multimodal response capabilities.
- Implemented custom ranking algorithms, reducing search time by 85%.
- Developed a real-time streaming response system.
- Technologies: Python, AI/ML, LLM, FastAPI

RAG-Based PDF Chatbot with OCR

- Built a scalable chatbot to parse and query 1000+ scanned PDFs using FAISS, LangChain, and Mistral OCR.
- Integrated document chunking, semantic search, and contextual LLM answers.
- Fine-tuned retrieval pipeline for speed and accuracy using Mistral + OCR.
- Technologies: Python, LangChain, Mistral, FAISS, OCR, FastAPI.

CIN.AI Filmmaking Suite

- Created AI-powered film production automation tools.
- Implemented storyboard generation and market analysis.
- Achieved 80% accuracy in audience prediction models.
- Technologies: Python, PyTorch, Streamlit

Ind-astroLLM Astrology System

- Developed a specialized astrology interpretation system with 85% accuracy.
- Implemented multilingual support and session management.
- Created custom API endpoints for astrological analysis.
- Technologies: Python, Azure AI, FastAPI, SQL, Docker

AI-Powered Jewelry Shopping & 3D Generation Experience

- Built an interactive AI system that simulates a real jewelry shopping experience by asking user preferences such as occasion, style, gifting intent, and material choice.
- Generated personalized jewelry design images and 3D-ready .glb models using OpenAI and Tripo3D, tailored to user input in real time.
- Designed for virtual shopping, online retail try-on, and rapid digital prototyping — compatible with Blender and AR previews.
- Tech Stack: Python, OpenAI, Tripo3D, Streamlit

TECHNICAL SKILLS

- Programming: Python, SQL, Scala, HTML/CSS, JavaScript (basic), BeautifulSoup
- AI & ML Frameworks: PyTorch, TensorFlow, Keras, Scikit-learn, OpenAI, Azure OpenAI
- LLMs & NLP: Transformers, RAG, LangChain, LLM Fine-tuning, NLTK, Spacy, Generative AI
- Deep Learning: CNNs, RNNs, Attention, LoRA, PEFT, Vision Transformers, OCR
- Data Science & Analytics: NumPy, Pandas, Matplotlib, Seaborn, Plotly, Statistical Modeling
- Databases: PostgreSQL, MySQL, MongoDB, NoSQL
- Big Data & ETL: Apache Spark, PySpark
- APIs & Backend: FastAPI, Flask, REST APIs, Docker
- Cloud & DevOps: AWS, Azure AI, Docker, Git, GitHub Actions
- Visualization Tools: Tableau, Power BI
- Tools & Platforms: Streamlit, Jupyter Notebook, Tripo3D, smallest.ai, FAISS, Mistral
- Other: MATLAB, Reinforcement Learning, Data Modeling, Business Intelligence

I Declare that the above details are correct and true to the best of my knowledge.

Dharmagna Vyas