

DHRUVAL PATEL – Generative AI Engineer

📍 Anand, Gujarat

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PROFESSIONAL SUMMARY

Generative AI Specialist focusing strictly on backend development and advanced LLM architectures. Engineered end-to-end RAG systems, context-aware AI assistants, and Agentic workflows utilizing FastAPI and local inference engines, driving measurable automation, data privacy, and optimized application performance.

TECHNICAL SKILLS

Generative AI & LLMs	LLM Configuration, RAG, LLM Tool Calling, MCP Servers, LLM Finetuning (Quantization, LoRa & QLoRa methods), Prompt Engineering
Vector & Search Technologies	Vector Embeddings, Vector Database (MongoDB), Semantic Vector Search (Cosine similarity & Euclidean distance), Large Document Chunking
Frameworks & Tools (Python):	LangChain, LangGraph, LlamaIndex, FastAPI, Ollama, Llama.cpp, Git/Github, AWS

COMPETITIVE EXPERIENCE

Runners-Up | SAMARTHA Hackathon (36 Hours) MBU, Andhra Pradesh

- Architected a zero-trace military messaging application within 36 hours, eliminating 100% of leftover message blueprints to render unauthorized chat tracing impossible.
- Engineered multi-layered privacy protocols utilizing temporary identity codes and biometric heart-rate monitors, complete safeguarding communications against of physical device theft vulnerabilities.

TECHNICAL PROJECTS

1. Realistic & Natural AI Video Dubbing Tool

- Developed a backend processing pipeline for video dubbing utilizing LLM inference and vector embeddings, achieving flawless voice identity matching to reduce manual dubbing times by 90%.
- Orchestrated external integrations via MCP Servers (Tool Integration) and Large Document Chunking for heavy subtitle payloads, processing 10+ minute videos seamlessly with zero format degradation.

2. Ultimate AI Voice Assistant

- Deployed a hybrid OpenAI + Ollama LLM architecture integrated with Google and Vosk speech recognition, slashing cloud latency to <1s while securing 100% of offline data via JSON with standard 3-7s response times.
- Programmed hot-word detection and OS-level integrations to automate commands, eliminating 65% of manual OS navigation while achieving up to 95% overall transcription accuracy.

3. AI Powered Job Preparation Platform

- Engineered a Python/React.js/FastAPI career accelerator that overhauled standard LMS architectures with AI assessments, automating evaluations and generating personalized roadmaps to achieve 90% accuracy in targeted skill improvement.

4. PDF Translator

- Developed a chunk-processing translation engine using "ai4bharat/indictans2-en-indic-1B", executing structural parsing algorithms that achieved 95% translation and 98% formatting accuracy to eliminate 100% of manual post-translation reformatting for large PDFs.

LEADERSHIP & VOLUNTEERING

Google Student Ambassador, MBIT | 2025 - 2026

- Led a Gemini orientation for 160+ students on advanced features (Pro, Nano Banana 2, Veo), securing 1-year free subscriptions to drive campus adoption.

IT & Technical Support Head, CVMU International Conference | 2024

- Directed the live streaming infrastructure and hybrid Google Meet integrations, bridging communication gaps for 100+ global delegates while delivering 100% uptime with zero disruptions.

Training & Placement Coordinator, MBIT | 2025 - Present

- Centralized placement data and streamlined institutional operations as the core student-leadership liaison, organizing professional seminars that accelerated interview readiness and optimized workflows for 5+ development initiatives.

Social Media Account Handler, MBIT | 2023 - Present

- Curated targeted digital content across institutional platforms, expanding the digital footprint of 10+ campus initiatives and driving measurable student engagement.

EDUCATION

B. Tech. - Computer Engineering, MBIT College of CVM University, Anand (9.30 CGPA) | 2023 – 2027