

Rohit Mukati

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Professional Summary

AI Engineer with 1.5+ years of experience building production-ready AI solutions, specializing in RAG systems, agentic AI, and multilingual NLP applications. Proficient in Python, LangChain, MCP, FastAPI, and vector databases, with proven expertise in system optimization and end-to-end deployment.

Professional Experience

Steve's AiLab | AI Developer

Aug 2024 – Present

- Architected an intelligent code retrieval system using RAG with Model Context Protocol (MCP), enabling semantic search across codebases with 95%+ accuracy and sub-300ms query response time.
- Built custom MCP tools for automated code modification and vector database synchronization, reducing manual code updates by 70% through AI-powered draft generation and approval workflows.
- Developed an AI-powered email sales outreach agent with calendar integration, automating personalized email generation and achieving 40% reduction in response time for prospect follow-ups.
- Implemented dual-agent architecture (draft generation + send automation) with feedback loop, processing 100+ daily interactions with context-aware personalization.

Neevcloud | AI & ML Intern

Dec 2024 – Jun 2025

- Developed *Chanakya AI*, a CBSE educational assistant by fine-tuning OCR models for handwritten recognition and structuring NCERT content into JSONL for curriculum-aligned responses using Meta's LLAMA 4 Scout.
- Built a speech-to-speech AI pipeline for 5+ Indian languages, achieving over 90% transcription accuracy with Whisper, Indic-BERT, and Parler TTS.
- Optimized NLP and speech components, reducing translation and synthesis latency by 30%, enhancing real-time educational interactions.

Projects

RAG-Powered Code Search with Model Context Protocol (MCP)

- What:** Built an intelligent code management system combining RAG with MCP for semantic code search, AI-powered modifications, and automatic synchronization between local workspace and vector database.
- Why:** To solve the challenge of navigating large codebases and enable developers to query, understand, and modify code using natural language, reducing manual search time by 80%.
- Achievement:** Implemented two custom MCP tools (RAG Search + Code Update) with Zilliz vector DB, achieving <300ms retrieval latency and 95%+ semantic search accuracy. Deployed FastAPI backend with Streamlit UI, processing 1000+ code files with automated embeddings pipeline.

AI Sales Outreach Agent with Calendar Integration

- What:** Developed an automated email sales system that generates personalized drafts, manages follow-ups, checks calendar availability, and handles prospect interactions with context-aware intelligence.
- Why:** To automate repetitive sales outreach tasks and enable sales teams to focus on high-value activities while maintaining personalized communication at scale.
- Achievement:** Integrated Google Calendar API and SMTP services with AI draft generation, reducing email response time by 40%. Built feedback loop for draft updates, processing 100+ daily interactions with 90%+ approval rate. Implemented FastAPI + Streamlit architecture with conversation history tracking.

Personalized Medical Chatbot

- What:** Engineered a medical chatbot using LangChain and RAG for accurate healthcare information retrieval.
- Why:** To provide instant, reliable medical information access for patients and healthcare professionals.
- Achievement:** Processed 700+ medical pages generating 2,000+ context-aware chunks with Pinecone vector database, achieving 95%+ accuracy and <300ms retrieval latency for real-time queries.

Education

Vikrant Group of Technology and Management

Bachelor of Technology, Information Technology and Engineering

Indore, MP

2021 - 2025

- Specialization in AI & ML

Technical Skills

Programming & Databases:	Python, SQL (MySQL, PostgreSQL), Java, Git/GitHub, MLflow
ML & DL Libraries:	NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, Keras, PyTorch
Web Frameworks:	FastAPI, Flask, Streamlit
Speech & OCR:	Whisper, Parler TTS, OpenCV, Tesseract, TrOCR
Generative & Agentic AI:	LangChain, RAG, Model Context Protocol (MCP), Prompt Engineering, Model Fine-tuning, Vector Databases (Pinecone, Zilliz), OpenAI API, Anthropic Claude
AI/ML Techniques:	Data Collection, Preprocessing, Feature Engineering, Classification, Regression, Clustering, Neural Networks, NLP, Word Embeddings, Transformers, Model Evaluation, Hyperparameter Tuning

Achievements & Certifications

- Earned a Badge of Completion for the Open-Access Data Science Virtual Experience Program – **[BCG]**
- Completed Data Science Virtual Internship Program – **[British Airways]**