

Aashutosh Karwa

Python Developer - GenAI

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Summary

GenAI Focused software engineer with 5 years of experience in backend engineering, AI-driven application development, and quality engineering across enterprise environments. Strong expertise in Python, FastAPI and modern microservices architecture. Hands-on experience building and validating LLM-powered applications using GPT-based models, LangChain, LangGraph, and agentic AI frameworks. Experienced in implementing Retrieval-Augmented Generation (RAG) pipelines, integrating vector databases, and orchestrating agentic workflows.

Work Experience

Senior Associate Consultant | Infosys

Dec 2023 - Present, Pune, India

- Designed and developed GenAI-powered backend services **using python 3.11 and FastAPI**.
- Built agentic AI workflows using **Langchain and LangGraph** and **implemented RAG pipelines** integrating LLMs (GPT-based models) with vector databases.
- Implemented async microservices architecture with proper type hinting and solid principles.
- **Integrated MongoDB & vector databases** for semantic search & worked with Kafka for event driven AI processing pipelines.
- Designed AI orchestration logic for multi-agent systems and deployed scalable services on **Azure**.
- Collaborated with cross-functional teams to productionize LLM applications.

Quality Engineering Analyst – GenAI QA | Accenture Solutions Pvt Ltd

May 2021 - Dec 2023, Remote, India

- **Designed automated validation frameworks** for LLM-based systems.
- **Performed prompt testing, hallucination detection**, and response quality evaluation.
- **Validated RAG pipelines** and semantic search outputs.
- Performed performance and **load testing for GenAI services**.
- **Conducted API testing for AI microservices (FastAPI)** and automated regression suites using python.
- Worked with development teams & stakeholders to ensure robustness of AI workflows.
- **Participated in architecture and design review** calls ensuring scalable backend design.
- Led quality engineering efforts for AI-powered enterprise application.

Education

Bachelor of Engineering (B.E.) in Electronics Engineering | Shri Ramdeobaba College of Engineering and Management

Aug 2017 - May 2021, Nagpur, India

Skills

- **GenAI and Agentic AI Expertise:** GPT, Claude, LLaMA, LangChain, LangGraph, Agentic Workflows, RAG (Retrieval-Augmented Generation), Prompt Engineering, Vector Databases, AutoGen
- **Programming Language and Databases:** Python 3.11, FastAPI, REST and Websocket APIs, Microservices Architecture, MongoDB, PostgreSQL, MySQL

- **Cloud and DevOps:** Azure AI Studio, Azure OpenAI Service, Azure API Management, CI/CD, Docker, Git, Azure Service Bus
- **Other Technical and Soft Skills:** RNN, ANN, LSTM, Transformer, Supervised learning, Unsupervised learning, Time series analysis, Lambda, Load Balancing, Hugging Face, LlamaIndex, PyTorch, TensorFlow, Keras, Attention to Detail, Communication Skills (Presentational, Active Listening), Problem-Solving, Critical Thinking, Analytical Skills, Team Collaboration, Adaptability, Stakeholder Management

Projects

Project 1: Cold Email Generator using LLaMA 3.3

Jan 2026 - Feb 2026, Remote

- Built an AI-powered cold email generation system using LLaMA 3.3 and Langchain, implementing prompt engineering & chaining logic, and structured response validation to generate high quality, personalized cold emails.
- Designed a scalable backend using Python and FastAPI, integrating LangChain orchestration layers to manage LLM calls, token optimization, and configurable business rules for enterprise use cases.

Project 2: Food Calorie detector using ChatGPT (Vision + RAG + Vector Search)

Jan 2026 - Feb 2026, Remote

- Built a multimodel GenAI application leveraging ChatGPT Vision for food image analysis, combined with a RAG pipeline accurately estimate calorie content and nutritional breakdown.
- Implemented semantic retrieval using vector embeddings and vector database search, enabling contextual enrichment from a curated nutrition dataset before LLM reasoning for precise calorie estimation.

Certifications

AZ-900: Microsoft Azure Fundamentals | Microsoft | Aug 2025

[Click here for Certificate Link](#)

AI-900: Microsoft Azure AI Fundamentals | Microsoft | Jan 2026

[Click here for Certificate Link](#)

Infosys Certified Generative AI Professional - Foundation | Infosys

Infosys Certified Generative AI Professional – Intermediate | Infosys

Infosys Certified Applied Generative AI Professional | Infosys

Achievements

- Improved AI response consistency by 25% through structured prompt validation.
- Built reusable AI workflow modules using LangGraph.
- Reduced response latency by 30% through async optimization.
- Delivered enterprise-grade AI solutions in consulting environment.
- Contributed to total savings of £993475.50 for the client during 2024-2025 quarter.

Awards

[**Accenture Success Catalyst Award | Accenture Solutions Pvt Ltd**](#)

Awarded for collaborating with clients, communities, and ecosystem to deliver exceptional value in GenAI project.

[**Spot Recognition Award | Accenture Solutions Pvt Ltd**](#)

Recognized by Domain delivery manager and client for extensive LLM validation and detecting major hallucination issues.

[**Certificate of Appreciation | Infosys**](#)

Given by Infosys and Client in recognition for a record of outstanding accomplishments.