

Karthikeyan K

AI Engineer | Full Stack Developer | Applied AI Solutions

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Professional Summary

Associate Data Analyst and Full Stack Developer with experience building AI-driven data solutions for enterprise and Fortune 500 use cases. Skilled in Python, LangChain, LangGraph, Gemini API, RAG, embeddings, LLM agents, entity resolution, data pipelines, and BI dashboards. Strong background in React, Next.js, TypeScript, Flask, FastAPI, and cloud deployment, with a focus on scalable automation, clean architecture, and transforming large, messy datasets into actionable business insights.

Professional Experience

Associate Data Analyst Jun 2025 – Present
Zinnov, Chennai, Tamil Nadu, India

- Build LLM-based role-mapping agents to automate classification, matching, and enterprise data workflow tasks.
- Develop company entity resolution systems using RAG, embeddings, and matching logic to reconcile millions of records.
- Design and maintain data preparation, enrichment, and validation pipelines that transform raw datasets into AI-ready inputs.
- Work hands-on with LangChain, LangGraph, and Gemini API to build and orchestrate multi-step AI agent workflows.
- Create BI dashboards and insight layers that help convert complex enterprise datasets into actionable business outputs.
- Collaborate cross-functionally to translate business requirements into scalable data, AI, and automation solutions.

Key Skills: LangChain, LangGraph, RAG, Gemini API, Python, Data Pipelines, BI Dashboards, Embeddings, LLM Agents

Education

B.Tech in Information Technology 2021–2025
DMI College of Engineering

HSC (78%) 2021

Singaram Pillai Higher Secondary School

SSLC 2019

Singaram Pillai Higher Secondary School

Certifications & Strengths

- Claude Certified Architect – Foundations, Anthropic
- Google Cloud – Introduction to Generative AI
- IBM SkillsBuild – Cybersecurity Fundamentals
- Hugging Face Transformers Workshop
- AI-Driven Innovations Webinar
- Strong problem-solving, debugging, clean architecture, and system design skills for scalable AI-first products.

Technical Skills

Programming: Python, JavaScript, TypeScript, SQL

Frontend: React, Next.js, Redux, HTML5, CSS3, Tailwind CSS, Framer Motion

Backend: Python, Flask, FastAPI, Node.js, Express.js, RESTful API Development, Firebase Authentication

AI Engineering: LLM Agents, LangChain, LangGraph, Gemini API, RAG, Embeddings, NLP, Prompt Engineering, Claude, OpenAI APIs

AI Data Systems: Data Pipelines, Entity Resolution, Vector Search, FAISS, BM25, Embedding Search, Data Preparation

Databases: MongoDB, Firestore, Vector Search

DevOps & Deployment: Vercel, CI/CD Pipelines (GitHub Actions), Environment Configuration, Production Builds

Software Engineering: Modular Architecture, API Integration, Authentication Flows, Error Handling, Performance Optimisation

Tools: Git, GitHub, VS Code, Postman, Credly

Key Projects

Enterprise Role Mapping Agent – Zinnov

- Built AI agents for enterprise job role classification, role matching, and workforce taxonomy automation.
- Used embeddings and semantic similarity to match noisy role titles with standardized role families.
- Integrated LangGraph workflows to orchestrate multi-step classification, validation, and decision logic.

Company Synon – Zinnov

- Developed a production-ready hybrid company name matching engine for mapping noisy names to canonical master records.
- Combined FAISS sentence embeddings, semantic search, BM25 keyword matching, and RAG architecture for accurate entity resolution.
- Matched and reconciled millions of company records across large-scale enterprise datasets.

AI Consultant Platform

- Built a multi-domain AI consulting platform with assistants for Education, Healthcare, Finance, and Retail use cases.
- Designed modular AI service layers with structured prompts, secure authentication, and real-time persistence.
- Delivered a production-ready responsive web application with scalable architecture and clean user workflows.