

PANKAJ SANGER

AI Engineer · ML Engineer · LLM Systems · GenAI · NLP

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PROFESSIONAL SUMMARY

Production-grade AI systems builder with a 5-year foundation in data analytics. Independently designed and deployed RAG pipelines, agentic AI assistants, and MCP tool servers using LangChain, LangGraph, FastMCP, OpenAI, and FAISS. Backed by strong ML and Deep Learning knowledge spanning ANN, CNN, RNN, LSTM, and Transformer architecture, which forms the foundation behind modern LLMs. Prior experience at Livpure and Mobilnxt (Dabur) delivered a 37.5% efficiency gain, real-time social intelligence across 25+ FMCG brands, and AI-powered pipelines built on OpenAI, Mistral, and Hugging Face. Now transitioning into a full-time AI Engineering role.

TECHNICAL SKILLS

AI & LLM Frameworks	LangChain, LangGraph, LangSmith, FastMCP, Tool Calling
LLM Providers	OpenAI, Groq, Mistral, Gemini, Ollama, Anthropic
RAG & Vector Search	FAISS, OpenAI Embeddings, Retrieval Pipelines
Deep Learning & NLP	PyTorch, TensorFlow/Keras, Hugging Face, LSTM, CNN, Transformers, spaCy, NLTK
ML Engineering	scikit-learn, Optuna, FastAPI, Flask, Pydantic
Data & Scraping	Pandas, NumPy, Selenium, BeautifulSoup, Google Sheets API, MySQL, SQLite
Deployment & Tools	Git, Docker, Render, Streamlit
BI & Analytics	Power BI, Looker Studio, Brandwatch

AI ENGINEERING PROJECTS

YouTube Transcript Intelligence Studio (RAG System)

2025 – 2026

LangChain · FAISS · OpenAI Embeddings · Streamlit · YouTube Data API v3 · Apify · Python | github.com/PankajSanger/youtube-intelligence-system

- Built a web app that searches YouTube videos, fetches transcripts, and automatically translates non-English content to English for consistent vector storage and retrieval.
- Implemented a production-grade RAG pipeline using OpenAI Embeddings and FAISS, splitting transcripts into 900-token chunks and retrieving the top-20 most relevant chunks to generate accurate AI-powered answers.
- Delivered a 4-tab Streamlit dashboard for video search, library management, and AI Q&A with real-time metrics and CSV export.

Agentic Research Assistant (LangGraph + MCP)

2025 – 2026

LangGraph · FastMCP · OpenAI GPT-4 · YouTube API · Reddit API · SQLite · Streamlit | github.com/PankajSanger/research-assistant

- Built an agentic AI chatbot using LangGraph where the agent autonomously decides whether to answer directly or call a tool, searching YouTube or Reddit based on user query context.
- Exposed YouTube and Reddit search as MCP tools using FastMCP server, enabling real-time multi-platform data retrieval during live conversations.
- Built a multi-turn Streamlit chat interface with persistent session memory so the agent retains full conversational context across interactions.

PROFESSIONAL EXPERIENCE

Mobilnxt Pvt Ltd (Client: Dabur India)

Aug 2024 – Present

Data Analyst, AI and Social Intelligence

- Led Social Listening and Competitive Intelligence for a 25+ brand FMCG portfolio, delivering 70+ executive-ready weekly reports on campaign performance, consumer behavior, influencer tracking, and market trends to Senior Leadership.
- Built real-time social monitoring pipelines and automated alert systems using Python, Pandas, and Looker Studio to track brand sentiment, competitor activity, and reputation risks across Instagram, Facebook, YouTube, Reddit, Google Trends, and news platforms.
- Leveraged OpenAI, Claude, Mistral AI, Hugging Face, and Ollama to automate transcript processing, sentiment analysis, review mining, and insight generation, enabling faster and more scalable research delivery.
- Delivered Brandwatch-powered competitive and NPD intelligence spanning share-of-voice, consumer sentiment, and emerging category trends, enabling data-driven decisions for Digital Marketing and Innovation teams.

Livpure Pvt Ltd

Mar 2019 – Jul 2023

Data Analyst

- Increased field engineer call productivity from 4 to 5.5 service requests/day for a 350-engineer PAN India workforce through data-driven routing and capacity analysis, achieving a 37.5% efficiency gain.
- Improved product delivery TAT for rental services by 30% via pipeline analysis and bottleneck identification, with recommendations implemented at PAN India level and regular management reporting.
- Contributed to achieving best-in-segment Amazon rating (4.8 stars) in the water purifier category through systematic review analysis and customer feedback loop reporting.
- Managed multi-source data pipelines (CRM, Molten software, field teams), built Excel dashboards and presented actionable insights with recommendations to senior management.

EDUCATION

B.Tech in Mechanical Engineering

79% Aggregate · 3rd University Rank (College Level)