

Ahmed Irfan

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PROFESSIONAL SUMMARY

Agentic AI Engineer with hands-on experience designing and shipping production multi-agent systems using LangGraph, LangChain, and n8n. Skilled in Retrieval-Augmented Generation (RAG), autonomous agent orchestration, vector databases, and human-in-the-loop workflows. Currently applying agentic AI and workflow automation as an AI & Automation Intern, and shipping full-stack AI products with FastAPI, Next.js, and React.

TECHNICAL SKILLS

AI & Agents: Agentic AI, LangGraph, LangChain, Multi-Agent Systems, Multi-Agent Orchestration, RAG (Retrieval-Augmented Generation), AI Agents, Human-in-the-Loop, Prompt Engineering, Tool Calling

LLMs & APIs: OpenAI GPT-4o, Anthropic Claude, Groq, LLaMA 3.3, Ollama, HuggingFace, Tavily API

Automation: n8n, Workflow Automation, Webhooks, REST API Integration

Vector Databases: FAISS, Pinecone, Qdrant, Semantic Search, Embeddings

Languages & Frameworks: Python, JavaScript, TypeScript, FastAPI, React, Next.js, Streamlit

Databases & DevOps: MongoDB, PostgreSQL, MySQL, SQLite, Git, GitHub, Docker, Vercel, WebSocket, Server-Sent Events (SSE)

EXPERIENCE

AI & Automation Intern | MatrixAE

July 2026 – Present

- Design and deploy n8n automation workflows integrating AI agents, LLM APIs, and third-party tools for business process automation.
- Build Retrieval-Augmented Generation (RAG) pipelines for AI-powered automation solutions, from data ingestion to production deployment.

PROJECTS

Multi-Agent Research Assistant | Python, LangGraph, FastAPI, React 19, Anthropic Claude, SSE | [GitHub ↗](#)

- Designed a 4-agent LangGraph pipeline (Clarity, Research, Validator, Synthesis) with confidence-based conditional routing and human-in-the-loop clarification for ambiguous queries.
- Streamed responses live via Server-Sent Events (SSE) to a React 19 frontend with a real-time agent pipeline tracker across multi-turn conversations.

Enterprise Agentic Workflow Engine | Python, LangChain, FastAPI, WebSocket, FAISS | [GitHub ↗](#)

- Built an AI agent orchestration platform using LangChain AgentExecutor, enabling autonomous agents to execute natural-language goals with live WebSocket streaming to a React dashboard.
- Integrated FAISS vector search with HuggingFace embeddings for multi-format RAG document retrieval and multi-LLM support (OpenAI GPT-4o, local Ollama) with per-run cost tracking.

Dental Clinic RAG Voice Assistant | n8n, Multi-Agent Orchestration, RAG, Qdrant, Postgres, Voice AI | [GitHub ↗](#)

- Orchestrated a 10-workflow multi-agent RAG system in n8n that fans a query out to pricing, booking, and FAQ agents in parallel and merges results — 14/14 hallucination-probe evaluations passed.

PEERLESS.AI — National AI Hackathon 2026 | Python, Multi-Agent Systems, Streamlit, Groq, LLaMA 3.3 | [GitHub ↗](#)

- Built a 7-agent research-integrity platform detecting statistical anomalies, citation errors, and reproducibility issues in scientific papers via GRIM checks and Crossref DOI verification.

ResumeIQ | n8n, RAG, Next.js, OpenAI GPT-4o, Gmail API | [GitHub ↗](#) | [Live Demo ↗](#)

- Built a two-stage AI resume-screening pipeline (extraction + rubric scoring) with an AI email assistant for HR outreach; deployed live on Vercel.

CERTIFICATIONS

[Crash Course on Python](#) – Google (Coursera)

Jul 2025

[Develop Generative AI Applications: Get Started](#) – IBM (Coursera)

Jul 2026

EDUCATION

Bachelor of Science in Computer Science

National University of Computer and Emerging Sciences (FAST NUCES), Islamabad, Pakistan

Relevant Coursework: Operating Systems, Data Structures, Advanced Algorithms, Database Systems, Artificial Intelligence, OOP

LEADERSHIP & COMMUNITY ENGAGEMENT

Educational & Environmental Volunteer

Local Underprivileged School

- Facilitated educational support sessions, teaching mathematics and literacy through interactive methods to boost student engagement.
- Spearheaded a school plantation drive and conducted environmental awareness discussions to promote community-level climate action.