

MOHD SAHIL

Data Scientist | AI Engineer

sahil.md.work@gmail.com | [LinkedIn](#) | [Github](#) | New Delhi, India

WORK EXPERIENCE

Rinventix Technologies

Oct 2023 – Present

Data Scientist

- **Insurance Document Digitization Platform:** Built an automated digitization pipeline to process 10,000+ commercial insurance policy documents, extracting structured data from unstructured formats including PDFs, spreadsheets, and email attachments.
- Developed a multi-modal extraction engine using **LLMs, VLMs, and OCR** to interpret unstructured data, complex tabular layouts, and diverse document types.
- **Developed an Evals Agent** that systematically identified and corrected extraction errors, increasing system accuracy from **80% to 95%** as validated by QA teams.
- **Real-Time Voice AI & Telephony Platform:** Built an end-to-end voice AI pipeline using LiveKit (WebRTC) and Twilio to enable low-latency, bidirectional conversations between AI agents and users over web and phone (SIP).
- Developed the core audio processing flow, integrating **Speech-to-Text (STT)**, **Text-to-Speech (TTS)**, and **Voice Activity Detection (VAD)** to handle natural speech interruptions and pauses.
- **Automated complex task execution** by building AI Agents capable of triggering external API workflows and managing state during live voice interactions.
- **Advanced RAG & Information Retrieval System:** Build a RAG pipeline using Hybrid Search (Vector + Keyword) and Reranking to optimize data retrieval from massive datasets of PDFs, Docx and web sources.
- Implemented advanced retrieval techniques such as **Query Expansion** and **HyDE (Hypothetical Document Embeddings)** to significantly improve the relevance of context provided to LLMs.
- Created a **multi-source data ingestion engine** capable of parsing and structuring information from diverse formats (Books, Websites, and structured JSONs) for semantic search.

Aidetic Software

May 2022 – March 2023

Data Scientist

- **Content Discovery and Recommendation System:** Built a data scraper using Selenium and Scrapy, and used OCR, Transformer models, and FAISS to create a fast vector search system for discovering and recommending relevant content.
- **Intelligent Video Analytics System:** Built a real-time video analysis system on NVIDIA Jetson, setting up the full flow from camera feed to data insights for edge computing.
- Developed age and gender detection models using **CNNs and OpenCV**, handling everything from face detection to image processing for demographic analysis.

EDUCATION

Galgotias College of Engineering & Technology

Bachelor of Technology in Computer Science

2016 – 2020

PROJECTS

MFReturns.com | Full-Stack Financial Tool

- Built and launched a mutual fund analytics platform (FastAPI, SQL, Next.js) computing SIP, CAGR, and XIRR returns across 3,000+ schemes, backed by a weekly automated NAV data pipeline.
- Deployed and maintained independently on a self-managed VPS with CI/CD automation.

TECH STACK

GenAI: LLMs, VLMs, Multimodal AI, RAG, AI Agents, Agentic AI, MCP, Vector Databases, Embeddings, Knowledge Graphs, LangChain, LangGraph

Data Science: Natural Language Processing, Computer Vision, Machine Learning, Deep Learning, Tensorflow, Pytorch, Scikit-learn, OpenCV, Optical Character Recognition (OCR)

Development & Cloud: Python, Django, Flask, SQL, PostgreSQL, Git, Docker, Microsoft Azure