Wasim Ansari

AI/ML Engineer | Gen AI Solution Architect | IITM Alumnus

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in Linkedin Profile ⬤ GitHub kaggle Kaggle 🔗 Portfolio 📖 Publications

Summary

I help organisations build scalable GenAI and ML systems that automate operational workflows. With IIT Madras training and eight years of cross-domain experience, I deliver production-ready Machine Learning models, RAG assistants, voice agents and multi-agent systems using LangChain, CrewAI, LLMs, Docker and GCP focused on measurable business value with complete observability that are ethically compliant.

Projects

AI Travel Planner (Multi-Agent Orchestration using CrewAI with online search tool) ⬀
- **Summary:** Built a multi-agent AI orchestration where three coordinated agents autonomously research tourist destinations, analyze user preferences, and generate personalized end-to-end travel plans.
- **Technologies:** CrewAI, LangChain, Streamlit, Python, CI/CD.

MediFlow - Medical AI Assistant (Multi-Agent Chatbot with MCP RAG tool and custom tools) ⬀
- **Summary:** A medical assistant chatbot that delivers personalized post-discharge care through multi-agent workflow. Receptionist with patient history tool & Clinical Agent with Nephrology RAG and search tools.
- **Technologies:** LangChain, LangGraph, LangSmith, MCP client, Google Cloud Run, CI/CD, HTML, React js.

Nephrology RAG MCP Server - exposing Nephrology RAG services as streamable HTTP ⬀
- **Summary:** Designed an MCP server exposing domain-specific retrieval-augmented generation (RAG) services as streamable HTTP endpoints for seamless integration with multiple AI agents concurrently.
- **Technologies:** FAISS, MCP Server, Python, Asyncio, Google Cloud Run, Docker, JSON-RPC 2.0

DocuDroid - AI Document Analysis Bot (LLM + Vector Search for Smart Document QA) ⬀
- **Summary:** Implemented a temporary in-memory vector store for immediate retrieval, combined with LLM-generated answers. Useful to chat instantly with the PDFs or static documentation webpages.
- **Technologies:** Python, FastAPI, LangChain, InMemoryVectorStore, Docker, Google Cloud Run.

PDF Excel Extractor - AI-Power-Tool (extracts data from PDFs and provided structured Excel) ⬀
- **Summary:** LLM analyzes documents to determine relevant fields for extraction (no hardcoded schema). Converts extracted text into structured Excel spreadsheets for downstream task. Complete Automation.
- **Technologies:** PDF Scraping, LLM schema detection, FastAPI, BLEU Score, Docker, Google Cloud Run.

Flux - Text-to-Image Generator (Powered by Hugging Face Diffusion Model) ⬀
- **Summary:** A powerful image generation tool leveraging state-of-the-art HuggingFace diffusion models to create images from text prompt. Offers intuitive UI as well as API to connect with other services.
- **Technologies:** Python, azurewebsites, Hugging Face Diffusers, PIL, Docker, FastAPI.

Jurisol - Legal AI Assistant (LLM based RAG application with online search and summarization tools) ⬀
- **Summary:** Engineered an intelligent legal search assistant using Retrieval-Augmented Generation (RAG), Chromadb vector database. Equipped with summarization tool and online legal document search.
- **Technologies:** RAG, Vector Database, LangGraph, FastAPI, Mistral LLM, Document Summarization.

Mogambo - Voice AI Calendar Assistant (Voice enabled AI Agent) ⬀
- **Summary:** Developed an AI calendar assistant with voice and text interaction, integrated with Google OAuth. Implemented context-aware scheduling, intent clarification, and automated workflows.
- **Technologies:** Google Calendar Automation, LangGraph, Google OAuth, TTS, STT, FastAPI.

BikeValuePro - ML Model for price prediction (Machine Learning Model with 94.9% Accuracy) ⧉
- **Summary:** Trained a ML model for used bike prices using Scikit-learn and XGBoost. Includes smart Streamlit UI and deployment-ready architecture. Display personalized advice based on predicted price.
- **Technologies:** Machine Learning, Predictive Analytics, XGBoost, Scikit-learn, Pandas, Streamlit.

IITM Assignment Solver (Problem solving using Code Generation and Self Executing AI Agent) ⧉
- **Summary:** Built an AI agent to process ZIP, CSV, PDF, Excel, and JSON files, generate Python code, and run it in a sandboxed environment. Developed to participate in an IITM college challenge securing A+ Grade.
- **Technologies:** AI Agent, Code Generation, LLM, File Processing, FastAPI, LangChain, Mistral, Automation.

Top Skills

Data Analysis & Exploration
- Statistical Analysis (Python, Pandas, NumPy, Metabase, OpenRefine, Hypothesis Testing)
- Visualization (Matplotlib, Seaborn, PowerBI)

Generative AI & Agentic AI
- Frameworks (LangChain, LangGraph, CrewAI, Agno, MCP clients and servers)
- Vector Databases (ChromaDB, FAISS, Qdrant)
- Workflow Orchestration & Automation (n8n)

Cloud & DevOps Platforms
- Google Cloud (Cloud Run, Cloud SQL, Cloud Storage, Cloud Build, SDK)
- Azure (Container Apps, App Service / Web Apps)
- Vercel, GitHub Pages, Hugging Face Spaces

Machine Learning & Deep Learning
- ML Algorithms (Supervised & Unsupervised)
- Neural Networks (ANN, CNN, RNN, Transfer Learning, Transformers, GAN, Diffusion)
- Frameworks (Scikit-Learn, TensorFlow, Keras, PyTorch, PyTorch Lightning)

MLOps & Model Deployment
- Model Serving (Docker, FastAPI, Flask, Streamlit)
- CI/CD & Versioning (Git, GitHub Actions)

Monitoring & Observability
- Model Performance Tracking (Evidently AI, Grafana, TrackIO, LangSmith)
- Drift Detection & Automated Retraining
- Guardrailing, Prompt Experimentation

Experience

09/2024 – Present
Dehradun, India

WSMAISYS (Independent Freelancer)
AI/ML Engineer & Gen AI Solution Architect
- Pursuing **IIT Madras' Diploma in Data Science** while independently advancing skills in Transformers, Reinforcement Learning, Generative AI, and Cloud-based ML systems.
- Developed AI solutions, including **GenAI applications,** predictive **modeling pipelines, computer vision** models, voice AI agents, **multi-agent coordination systems, RAG-based chatbots**, and custom **AI power tools** tailored for real-world use cases.
- Delivered production-ready applications using **Docker, FastAPI, Flask, Streamlit, and Google Cloud/Azure** with a focus on scalability, robustness, and secure deployment practices.
- Ranked in the **Top 5% on Kaggle** in a cybersecurity detection challenge, demonstrating strong applied machine learning capabilities and practical problem-solving.
- Actively building a **diverse project portfolio** to demonstrate adaptability, technical depth, and eagerness to take on real-world AI/ML challenges.

12/2022 – 09/2023
Kingston Upon Hull, UK

Booze Blitz - Ahaan Limited
Retail Sales Manager
- Led compliance and strategic sales planning that boosted revenue by 20%.
- Inspired ML-based solutions for pricing, demand forecasting and **retail analytics**.

09/2021 – 11/2022
Dehradun, India

Ahlan Exports
Import Export Entrepreneur
- Managed international B2B logistics, compliance and digital marketing funnels.
- Experience translates into AI interest in **supply chain optimization**.

02/2015 – 01/2020 Dubai, UAE	**FAHZAM Properties** Real Estate Consultant • Managed property portfolios & client legal clearances. Certified RERA Broker. • Insights now inform AI projects in **real estate valuation and docs automation**.
09/2013 – 04/2014 Hyderabad, India	**QuisLex Legal Services** Legal Associate • Reviewed legal documentation & case summaries with accuracy and compliance. • Inspired the need for automation in **document review and compliance QA via AI**.
12/2012 – 07/2013 Pune, India	**Mindcrest India** Research Associate-Citator • Classified legal cases with 90%+ accuracy in half the average processing time. • Domain insights now power **AI-based legal summarizers and DB management**.

Education

09/2024	**Indian Institute of Technology, Madras** ⧉ Diploma in Data Science • **Pursuing Coursework:** ML, Linear Algebra, Statistics, Business Analytics, Tools for Data Science, Deep Learning, Gen AI, Capstone Projects. **Grade: CGPA 8+** • **Projects:** System Threat Forecaster (Top 5% in Kaggle), Assignment AI Agent
2007 – 2012	**Savitribai Phule Pune University** ⧉ Bachelor of Laws (5 years integrated) • **Coursework:** Constitution, Civil and Criminal Laws, Procedural Laws, IPR, Banking Law, Environment Law, Drafting. **Grade: Higher Secondary Class** • **Achievements:** Participant of 1st Student Parliament, Moot Court Competitions.

Languages

English — Fluent
IELTS 7 Band

Hindi — Native/Bilingual
Native or Bilingual

Urdu — Native/Bilingual
Native or Bilingual

Certifications

Understanding Google Cloud Platform ⧉   Azure Essentials ⧉   Dubai RERA Certification ⧉

Thoughts and Publications

Adapting Export Strategies for Indian Handmade Carpets: A Response to Rising Global Tariffs ⧉
Discover a data-driven export strategy for India's handmade carpet industry navigating rising U.S. tariffs with advanced Python-led trade analytics, market opportunity scoring, and competitive benchmarking.

Hallucinations in AI Legal Research: A Lawyer's Worst Nightmare? ⧉
Authored an article on AI hallucinations in legal research, highlighting real-world risks of fabricated case law and the need for prompt precision. Advocated safe AI adoption in law through domain-specific models and ethical safeguards.

Teaching Computers to See Like Humans: The Brain Science Behind Smart Technology ⧉
The article explains how Convolutional Neural Networks (CNNs) work - using kernels, feature maps and layering - to enable machines to "see" images like humans, powering modern computer-vision applications.