



Amir Aijaz

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About myself

AI Engineer with two years of experience building and deploying production AI systems across large language model (LLM) applications, retrieval-augmented generation (RAG), multi-agent systems, and computer vision. I work end to end in Python with FastAPI and React, and across the modern AI stack including PyTorch, Hugging Face, LangChain, vector databases, and Docker-based cloud deployment. I have applied research experience benchmarking speech and language models, and I built Vigil, an open-source AI governance platform aligned with the NIST AI Risk Management Framework. My goal is to strengthen my theoretical and research foundations in machine learning, NLP, and trustworthy AI through graduate study.

Education & Training

Bachelors in Computer Science | University of Karachi | 01/01/2021 - 01/12/2024 | Karachi, Pakistan

Final Year Project: SignVision, a real-time Urdu sign-language recognition system built with MediaPipe Holistic and a CNN-LSTM model, translating gestures into Urdu text and speech.

Relevant coursework: Artificial Intelligence, Natural Language Processing, Data Structures, Statistics and Data Analysis, Data Warehousing and Data Mining, Database Management.

Work experience

AI Engineer | Viral Tech | 01/08/2025 - Current | Remote, Norway

- Designed and built a cost-optimized e-commerce chatbot using open-source and commercial LLMs to improve customer support and conversions.
- Benchmarked emerging LLMs on capability, latency, and inference cost to guide model selection.
- Built Knowlyst, an AI knowledge system that ingests web and video links and answers user questions over the content using RAG.
- Developed n8n automation workflows, including an email-to-CSV newsletter summarizer and a Telegram image-generation bot.
- Created AI video-generation pipelines for advertising content.

AI Engineer | TechThrone Innovations Pvt. Ltd. | 01/05/2025 - 31/07/2025 | Karachi, Pakistan

- Built a self-hosted local LLM assistant for content creation and social media management.
- Developed AI products including text-to-image generation, automated HR screening, and lead-generation agents.
- Cleaned and analyzed geospatial and business datasets for enterprise clients including CBL and EBM.
- Deployed chatbots and AI solutions that supported agency-wide AI adoption.

Junior AI Engineer | CodeNexo | 01/01/2025 - 30/04/2025 | Karachi, Pakistan

- Built AI tools for newsletter and blog generation using the Claude API, Flask, and the YouTube Data API.
- Automated team workflows through Asana and deployed scalable applications on AWS.
- Developed internal content-automation tools using LLMs and prompt engineering.

Python and Computer Vision Intern | The Disrupt Labs | 01/06/2024 - 01/10/2024 | Karachi, Pakistan

- Developed Python scripts to measure 2D object distances in warehouse environments.
- Applied open-source depth-estimation models to real-time CCTV video feeds.
- Contributed to backend development, writing and optimizing code for ongoing projects.

AI Research Assistant (Internship) | Smart City Lab, NCAI, NED University | 05/12/2023 - 30/05/2024 | Karachi, Pakistan

- Developed an Arabic-language voice assistant for Sahl AI, covering dataset preparation, model fine-tuning, and integration.

- Ran a comparative analysis of Wav2Vec and Google Speech models on Hugging Face to select the most accurate approach for Urdu speech-to-text.
- Gathered, cleaned, and preprocessed annotated datasets for ADAS projects.
- Worked with transformer-based deep learning models using PyTorch and Hugging Face.

Projects

AI Voice Calling Agent | 25/05/2026 - Current

Voice AI calling agent built with Vapi for automated outbound and inbound phone conversations. Engineered for cost efficiency at scale, designed to handle high daily call volumes while keeping per-call infrastructure cost low. Built with FastAPI and a telephony and LLM pipeline for real-time speech, with configurable scripts and call routing.

Vigil, AI Governance Dashboard | 01/03/2026 - 07/06/2026

Open-source AI governance and observability platform for LLM applications. Provides a model registry with risk classification, full request and response audit logging, automated detection of PII and toxicity, cost tracking across 250+ models, and one-click NIST AI Risk Management Framework compliance reports. Built with FastAPI, React, TypeScript, PostgreSQL, Redis, and Docker, with a published Python SDK.

<https://github.com/amiraijaz/ai-governance-dashboard>

Legal Mind AI, RAG Legal Document Assistant | 01/09/2025 - 30/11/2025

Retrieval-augmented generation system that lets legal teams query large PDF documents in natural language and receive answers with source citations. Built with LangChain, ChromaDB, FastAPI, and React, supporting multiple LLM backends including Gemini, OpenAI, and local Ollama models.

<https://legal-mind-ai-assistant.vercel.app/>

Fog Removal for Autonomous Vehicles | 07/01/2025 - 02/04/2025

Computer vision system that improves visibility in foggy driving conditions. Combines dark channel prior dehazing and CLAHE contrast enhancement with YOLOv8 object detection to identify pedestrians, vehicles, and traffic signals in adverse weather.

<https://github.com/amiraijaz/Fog-Removal-for-Autonomous-Vehicles>

SignVision, Urdu Sign Language Translator | 10/10/2024 - 23/12/2024

Real-time Urdu sign-language recognition system and final year project. Captures gestures via webcam, extracts 1,662-dimensional keypoints with MediaPipe Holistic, classifies them using a CNN-LSTM model, and renders the result as Urdu text and speech.

<https://github.com/amiraijaz/SignVision.git>

Skills

Programming languages | Python | Javascript | Typescript | C++ | SQL

AI and machine learning | PyTorch | Keras | deep learning | scikit-learn | Hugging Face Transformers | TensorFlow

LLMs and agents | LangChain | Vapi | RAG | CrewAI | prompt engineering | OpenAI / Anthropic / Gemini APIs

Natural language processing | transformers | NLTK | sentence-transformers | spaCy

Computer vision | YOLOv8 | image segmentation | MediaPipe | OpenCV | Tesseract OCR

Backend and web | FastAPI | Flask | Django | React | Next.js | Node.js

Databases | PostgreSQL | ChromaDB | Redis | MongoDB | MySQL | Pinecone | Qdrant

Cloud and DevOps | Docker | Git | Render | n8n | AWS | Vercel

Language Skills

Mother tongue(s): **Urdu**

	Understanding		Speaking		Writing
	Listening	Reading	Spoken production	Spoken interaction	
English	B2	B2	B2	B2	B2
Punjabi	C1	A2	B1	B2	A1
German	A1	A1	A1	A1	A1

Certifications

Artificial Intelligence on Microsoft Azure | Microsoft (via Coursera) | 01/09/2023

<https://coursera.org/verify/U5MS6GBQ9R6G>

Python for Data Science, AI & Development | IBM (via Coursera) | 08/07/2022

<https://coursera.org/verify/S58MWS5MGAVD>

Introduction to AI with Python | Smart City Lab (NCAI) & CERD Academy, NED University | 08/04/2021

Publications

[aigovkit, a Python SDK for AI governance and LLM observability](#)

Amir Aijaz (2026). Python package published on PyPI, version 0.2.0.

[governance-bench-v1, a benchmark dataset for evaluating AI governance scanners](#)

Amir Aijaz (2026). 200-case curated benchmark covering PII detection, hallucination, and prompt-injection resistance. Published on Hugging Face under CC-BY-4.0.