

HAMZA ASIF

Full-Stack AI Engineer

Lahore, Pakistan | hamza.asif0087@gmail.com | [linkedin.com/in/hamza-asif043](https://www.linkedin.com/in/hamza-asif043) | github.com/HaMZAAsif043

PROFESSIONAL SUMMARY

Full-Stack AI Engineer with 2 years of production experience building real-time voice AI systems, LLM-powered agents, and full-stack web platforms for international clients. Reduced end-to-end voice response latency by over 85% across two separate production pipelines and shipped bilingual (Urdu/English) conversational agents handling live phone calls. Strong foundation across Python/Django, Next.js/TypeScript, applied computer vision, and MCP-based agent architectures. Final-semester BS Artificial Intelligence student, graduating July 2026.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Dart

Backend & APIs: Django, Django REST Framework, FastAPI, Node.js/Express, Django Channels (WebSockets), Celery, Redis

Frontend: Next.js, React, Vue.js, React Three Fiber, Redux, Tailwind CSS

AI / ML: Gemini Live API, Vertex AI, LLM Agent Design, RAG, MCP (Model Context Protocol), Computer Vision (CNNs), TensorFlow, Scikit-learn

Data & Infra: PostgreSQL (primary), SQL Server, MongoDB, MySQL, Docker, AWS, Railway, Vercel, Git/GitHub, CI/CD

Integrations: REST API Design, JWT/OAuth2, SIP Telephony (Asterisk/Twilio), WhatsApp Business API, Shopify Storefront API

PROFESSIONAL EXPERIENCE

BlenSpark — Lahore, Pakistan

Sept 2024 – Present

Full-Stack AI Engineer (progressed from Frontend Intern → Associate Software Engineer → Full-Stack AI Engineer)

- Led design and delivery of a bilingual (Urdu/English) AI voice agent platform (flagship product, detailed below) now handling live production phone calls for healthcare and restaurant clients.
- Built a real-time 3D product configurator (React Three Fiber, Three.js, TypeScript) with live material and texture switching, integrated with the Shopify Storefront API for checkout, delivered for a Boston-based AV manufacturer.
- Developed a WhatsApp Business API multi-agent system (Meta Cloud API, Green API) for automated bilingual customer conversations, including a voice-to-voice bot pipeline (audio capture to Gemini STT/LLM/TTS to audio reply).
- Built internal admin and client-facing dashboards with Django REST Framework and Next.js for managing voice agent configuration, call logs, and client accounts.
- Deployed and maintained production services on Railway (Daphne ASGI, WebSocket scaling, service-account credential management).

FEATURED PROJECTS

Bilingual Voice Agent Platform (BlenSpark) | Live — voiceagent.blenspark.com

- Built a production AI voice agent platform with three bilingual (Urdu/English) personas — Sara (healthcare scheduling) and Ali/Zara (restaurant ordering) — handling real inbound and outbound phone calls via SIP/Twilio telephony, powered by the Gemini Live API on Vertex AI and Django Channels/WebSockets.
- Re-engineered the real-time audio pipeline (SIP/Twilio μ -law 8kHz to Gemini PCM16 16-24kHz transcoding), cutting end-to-end voice response latency from roughly 8 seconds to under 2 seconds and reducing per-call AI costs by approximately 80%.
- Deployed on Railway (Daphne ASGI) with WebSocket-based scaling for concurrent live calls.

TravelMate AI — Real-Time Trip Planning Agent (Final Year Project)

- Built a full-stack AI travel planning platform (Django, Next.js) with a custom MCP server that fetches real-time flight and hotel availability from the Amadeus API.
- Built an LLM-powered agent (Grok/LLaMA) that queries the MCP server on user request, reasons over live flight and hotel data, and generates complete trip itineraries through a conversational interface.

SpeakUp — Cross-Platform Voice Assistant App | Live on Google Play Store

- Built a Flutter mobile app with an Express.js backend for LLM-based voice conversations.
- Optimized the audio streaming pipeline to cut first-audio-chunk latency from 15 seconds to under 2 seconds.

DineIn & Street24 — Restaurant Marketplace Platforms | dinein.pk

- Built full-stack restaurant discovery and booking marketplace platforms for the Pakistani (DineIn) and US (Street24) markets, including owner/admin dashboards, booking management, and JWT + Google OAuth authentication.
- DineIn: Next.js, Django, PostgreSQL. Street24: Vue.js frontend with a PostgreSQL-backed API, built for the US market.

EDUCATION

BS Artificial Intelligence — University of Management and Technology (UMT), Lahore

Expected: July 2026

CERTIFICATIONS

- IBM AI Engineering Professional Certificate — Coursera / IBM