

Muhammad Ahsaan Ullah

AI Automation Engineer — AI Applications Engineer — Python Backend Developer

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PROFESSIONAL SUMMARY

AI Automation Engineer focused on building production-ready AI applications, SaaS platforms, intelligent automation systems, and backend services.

Experienced in FastAPI, PostgreSQL, Docker, React, AI Agents, RAG systems, Computer Vision, and cloud deployment.

Built multiple end-to-end systems including DeepFakeShield (AI Forensics Platform), TarkaBot (AI Restaurant Operating System), and EduMentor Live (Multimodal AI Tutor).

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript, TypeScript

Backend: FastAPI, REST APIs, PostgreSQL, Redis, Supabase

Frontend: React, Next.js, Vite, Tailwind CSS

AI Engineering: RAG, LangChain, LangGraph, Gemini AI, OpenAI APIs, Prompt Engineering

Machine Learning: PyTorch, Computer Vision, OpenCV, Pandas, NumPy, Scikit-Learn

DevOps Deployment: Docker, Git, GitHub, Linux, DigitalOcean, Vercel

SELECTED PROJECTS

DeepFakeShield — AI Forensics Platform

- Developed a 3-class Deepfake Detection System classifying Real, Fake, and AI-Generated media.
- Achieved 95.83
- Built FastAPI inference services, React frontend, OpenCV video processing, and webcam integration.
- Optimized training using Automatic Mixed Precision (AMP) and class balancing techniques.

TarkaBot — AI Restaurant Operating System

- Built a multi-tenant SaaS platform automating WhatsApp restaurant order processing.
- Implemented NLP workflows, PostgreSQL Row-Level Security, Redis caching, and Supabase Realtime.
- Developed POS workflows, thermal printing, and real-time kitchen dashboard notifications.

EduMentor Live — AI Bilingual Tutor

- Developed a real-time multimodal AI tutoring assistant using Gemini Live APIs.
- Integrated WebRTC screen sharing, voice interaction, and FastAPI backend services.
- Enabled contextual AI tutoring using audio and visual inputs.

EDUCATION

Bachelor of Science in Computer Science

University of Management and Technology (UMT)