Ali Hassan Shahid

Machine Learning Engineer

Details

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Skills

Artificial Intelligence & ML:
LLMs, NLP, RAG Systems,
Fine-tuning, Conversational AI

Programming & Frameworks:
Python, PyTorch, TensorFlow,
Django, Streamlit, Selenium

Deployment & DevOps:
Docker, AWS, GCP, GitHub
Actions

Libraries & Tools:
Hugging Face, Whisper,
Llama, OpenCV, YOLO,
Qdrant, FAISS, Chroma

Data Analytics: Tableau,
Power BI, Data Science,
Business Intelligence

Effective
Communication

Client
Interaction

Time
Management

Certifications

- Python for Data Science,
  AI & Development – IBM /
  Coursera
- AWS Cloud Technology –
  DataCamp
- Working with Llama 3 –
  DataCamp
- Data Analytics & Business
  Intelligence – DigiSkills

Languages

English
Urdu

Profile

Innovative Machine Learning Engineer with proven expertise in developing production-grade AI systems. Specialized in LLM fine-tuning, Retrieval-Augmented Generation (RAG), and multilingual conversational AI. Demonstrated success in automating complex workflows, achieving up to 80% efficiency gains for international clients. Adept in Python, transformer-based architectures, and cloud-based model deployment.

Education

Bachelor of Science in Software Engineering
Comsats University Islamabad – Wah Campus
2022-2026

FSc Pre-Engineering
FG Degree College For Men
2020-2022

Professional Experience

Freelance Machine Learning Engineer
Self-Employed | Remote
Jul 2024 – Present

- Engineered AI-driven systems for global clients, specializing in LLM customisation and automation tools.
- Deployed tailored solutions for recruitment platforms, enhancing matching accuracy and reducing human effort.
- Built multilingual AI models with advanced Arabic and Urdu language understanding.

Key Achievements:

- Delivered an AI profiling system that automated candidate screening, improving processing time by 80%.
- Designed production-grade RAG-powered chatbots with high contextual accuracy.

Projects

RAIVA Assistant – Multilingual Voice AI
GitHub

- Fine-tuned Whisper for Urdu accent detection; improved speech recognition accuracy to 95%.
- Integrated RAG and Llama for context-aware dialogue; deployed with Bark for TTS.

ArabicWhisper – Quran Memorisation Platform (Final Year Project)

- Customised Whisper for Arabic religious content; achieved 92% accuracy in pronunciation evaluation.

Business Process Automation Suite

- Designed multi-agent bots streamlining recruitment, inventory, and customer support.
  - Resume Generator: Matched candidates to job roles via AI screening
  - Availability Bot: Real-time product monitoring and automated purchase execution

Cultural AI – Urdu Poetry Chatbot with RAG

- Implemented semantic search across 10K+ Urdu poems using vector databases.
- Published a widely viewed technical breakdown on Medium.

Additional Highlights

- Text Summarisation: Customised T5 model; ROUGE score: 0.85
- Object Detection: Deployed YOLO v3 with 89% mAP for real-time scenarios
- Voice-Based Gender Prediction: Achieved 91% accuracy using deep learning
- Loan Approval Predictor: Built a predictive analytics tool with 94% model precision

Publications

- How RAG is Transforming Chatbot Development, Medium – Apr 2025
- Implementing Prolog in Python, Medium – Jun 2025