

Tashfeen Raza

AI/ML Engineer

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Summary

AI/ML Engineer (BSAI) focused on applied machine learning and computer vision: transfer learning, ensemble modeling, and deployment. Experienced with PyTorch/TensorFlow, FastAPI, evaluation pipelines, and end-to-end systems from preprocessing to inference.

Education

BS Artificial Intelligence — National University of Modern Languages (NUML), Islamabad Feb 2022 – Jan 2026
Coursework: Machine Learning, Deep Learning, NLP, Computer Vision, Speech Processing, Reinforcement Learning

Experience

LLM Integration & Product Enhancement Engineer (Contract) — Dassoft, NASTP, Rawalpindi Oct 2025 – Dec 2025

- Enhanced an AI-powered cybersecurity product by refining LLM prompts and workflows for accurate, executive-ready reports.
- Implemented new AI-driven modules aligned with business needs; collaborated on usability, scalability, and performance improvements.
- Designed stress-test prompts (edge cases, ambiguity, multi-step reasoning) and documented failure modes to improve consistency.

AI/ML Intern — Siberkoza (Startup), NASTP, Islamabad Jul 2025 – Aug 2025

- Contributed to SOC automation: preprocessing streaming logs, feature engineering, baseline modeling, and evaluation/monitoring loops.
- Worked with locally hosted models (inference + domain adaptation) and integrated ML outputs via backend APIs.

Projects

Smart Extract — Surveillance Clip Extraction & Severity (Final Year Project) *Code available upon request*

- Offline system to detect accident/fire events, classify severity (Low/High), and auto-extract buffered evidence clips.
- Stacked ensemble (VGG19/InceptionV3/ResNet50) with temporal voting and confidence thresholding.

COVID-19 CT Scan Detector — Ensemble Deep Learning Web App 

- Transfer learning ensemble (ResNet50, VGG16, Xception) with probability fusion; achieved 84.45% validation accuracy.
- FastAPI backend + React frontend; optimized inference to <2 seconds per image and added input validation.

PhishGuard — AI-Powered Phishing Detection (Chrome Extension + FastAPI) 

- Built a Gmail phishing detection system combining rules, threat intel (VirusTotal, AlienVault OTX), and Gemini AI.
- Chrome Extension (Manifest V3) + FastAPI backend with live monitoring, 0–100 risk scoring, alerts, and scan history.

AI Voice Agent — Multi-Model RAG Platform 

- RAG with ChromaDB + embeddings; voice pipeline with Groq Whisper STT and gTTS; deployed on Streamlit Cloud.

Technical Skills

Languages: Python, SQL, JavaScript (basic) **ML/DL:** PyTorch, TensorFlow/Keras, scikit-learn

CV: transfer learning, ensembles, evaluation (accuracy/precision/recall/F1), inference optimization

Backend: FastAPI, Flask, REST APIs, Streamlit **Vector DB/LLM:** ChromaDB, FAISS, RAG

Libraries: NumPy, Pandas, OpenCV, Matplotlib **Tools:** Git, Docker (basic)

Certifications

Machine Learning Specialization (Coursera, 2024) — Generative AI with RAG & LangChain (Coursera, 2024)