

Kushagra Pandya Machine Learning Engineer

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PROFESSIONAL SUMMARY

AI/ML Engineer delivering end-to-end production AI solutions, from prototyping to deployment. Experienced in LLM applications, multi-agent systems (LangChain, LangGraph, CrewAI), and RAG pipelines. Built scalable systems including document intelligence (60K+ daily hits), liveness detection, and 95% accurate deepfake detection.

EXPERIENCE

Software Engineer - AI, TSS Consultancy Pvt Ltd 03/2026 – Present | Rajkot, India

- Designed and deployed an **Active Liveness Detection** system to distinguish live users from spoofing attempts (photos, videos, 3D masks), integrated into real-time identity verification pipelines.
- Engineered **multi-stage challenge-response** liveness checks using facial landmark analysis and texture anti-spoofing models, achieving high precision with low false-acceptance rates.

Associate Software Engineer - AI, TSS Consultancy Pvt Ltd 01/2024 – 02/2026 | Rajkot, India

- Deployed a high-throughput Document Image Classification system (60K–70K daily API hits, **~0.5s latency**) in production.
- Built and deployed a **multilingual OCR pipeline** (8 Indian languages) and identity document extraction system using OCR and deep learning.
- Developed Deepfake Detection (**95% accuracy**) and optimized model inference using **ONNX, quantization, Docker**, and Azure for scalable deployment.

Research Intern, TSS Consultancy Pvt Ltd 11/2022 – 08/2023 | Remote

- Developed AI solutions across NLP and Computer Vision, including **sentiment analysis, NER, face matching**, and **automated data extraction** using Azure OpenAI.
- Built **data pipelines** and productionized models by collaborating with research and engineering teams for scalable, real-world deployment.

SKILLS

Languages: Python, SQL | **Frameworks:** PyTorch, OpenCV, Hugging Face, scikit-learn, Langchain, Langgraph, RAG Pipelines | **Specializations:** Model Optimization, Quantization, Pruning, Computer Vision, NLP, Multimodal AI, LLMs, Fine-Tuning | **Tools & Platforms:** Docker, mlflow, DVC, Weights & Biases, Azure AI, ChromaDB, FAISS, Pinecone, FastAPI | **Optimization & Deployment:** ONNX Runtime, TensorRT, Azure, AWS

EDUCATION

B.Tech, Computer Engineering in Specialization in Artificial Intelligence, Marwadi University 2020 – 2024 | Rajkot, India

Coursework :- Python, Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Statistics, Probability.

PROJECTS

AI Research Assistant

Developed an AI Research Assistant using LangGraph and a **multi-agent** architecture with **RAG** and fact-checking modules, integrating **Gemini, Mistral**, and **Groq** APIs to generate verified research reports with citations.

AI-powered ATS Resume Optimizer

Developed an AI-powered ATS Resume Optimizer using LangChain, LangGraph, and Streamlit that analyzes and enhances resumes against job descriptions using **multi-agent LLM workflows (Gemini, Mistral, Groq)**. Implemented keyword-based ATS scoring, ChromaDB **vector search**, and automated resume rewriting to boost match scores and job relevance.