Faijan Khan

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Education

Vellore Institute of Technology — Bhopal, India
B.Tech in Computer Science (CGPA: 8.45) — *Oct. 2022 – Present*

Technical Skills

Languages: Python, Java, SQL
AI & ML: PyTorch, TensorFlow, YOLO, OpenCV, PaddleOCR, LangChain, RAG Pipelines, Groq API
Tools & Platforms: Docker, Git, FastAPI, Redis, Celery, Apache Tika, Google Colab

Experience

Data Science Intern — Jan 2025 – July 2025
Sabudh Foundation — *Remote*

- Engineered an automated computer vision pipeline using **OpenCV** to analyze 540+ frames/min of NBA footage for brand advertisement detection.
- Fine-tuned **PaddleOCR (PP-OCRv5)** on a custom dataset of tilted/occluded logos, achieving **84.68% Precision** and **86.44% F1-score**.
- Optimized inference speeds to **2.75 FPS** by implementing custom pre-processing pipelines and lightweight model quantization.
- Deployed the solution using **FastAPI, Redis, and Celery**, handling asynchronous video tasks and reducing manual ad-tracking effort by 90%.

Projects

NeuralDoc - High Performance RAG Engine | *Java, Groq LPU, Docker, Tika* — Nov 2025

- Architected a hybrid AI pipeline combining local **Apache Tika** extraction with **Groq LPU inference** (Llama 3) to process unstructured PDFs in less than **600ms**.
- Implemented "Smart Context" chunking logic to algorithmically slice documents (Intro/Body/Conclusion), overcoming LLM context window limits.
- Designed a progressive loading system that delivers instant 80/20 summaries while asynchronously generating complex Bloom's Taxonomy questions.
- Containerized the entire pipeline using **Docker** for consistent deployment across environments.

Virtual Try-On System | *Python, PyTorch, cGAN, U-Net* — Aug 2024 – Jan 2025

- Developed a photo-realistic virtual try-on system using U-Net generators and Conditional GANs to preserve garment texture.
- Implemented Thin-Plate Spline (TPS) warping for spatial garment alignment, handling diverse body poses effectively.
- Optimized inference pipeline, reducing generation time by 40% to achieve 20-second results on standard hardware.

Leadership

Event Management Lead — Sep 2023 – Nov 2024
EDU4U Club, VIT Bhopal

- Led a team of 10+ students to organize technical events, managing logistics for 500+ attendees.

Certifications

Oracle Certified Generative AI Professional
Oracle Certified Data Science Professional
Oracle Certified AI Foundations Associate