

Faijan Khan

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EDUCATION

Vellore Institute of Technology

B.Tech in Computer Science & Engineering

CGPA: 8.45

Oct. 2022 – Present

TECHNICAL SKILLS

Languages: Python, Java (Core & OOPs), SQL

AI & ML: PyTorch, TensorFlow, OpenCV, RAG Pipelines, LLM Integration (Groq/Llama 3), LangChain

Backend & Tools: FastAPI, Docker, Git, Redis, Apache Tika, Celery

Core Concepts: Data Structures & Algorithms, DBMS, Object-Oriented Programming

EXPERIENCE

Data Science Intern

Jan 2025 – July 2025

Sabudh Foundation

Remote

- **Built** an automated computer vision pipeline using **OpenCV** to detect brand advertisements in NBA footage, processing **540+ frames/min.**
- **Improved** detection accuracy to **84.68% Precision** by retraining the PaddleOCR model on a custom dataset of tilted and occluded logos.
- **Optimized** the processing speed from <1 FPS to **2.75 FPS** by creating a custom pre-processing script to filter irrelevant frames.
- **Integrated** the model with a **FastAPI** backend and used **Redis & Celery** to handle video processing tasks asynchronously, preventing system timeouts.

PROJECTS

NeuralDoc - Hybrid RAG Engine | Java, Python, Groq LPU, Docker

Oct 2025 - Nov 2025

- **Built** a document analysis system that uses **Java (Apache Tika)** for robust PDF parsing and **Python (Groq LPU)** for fast AI inference.
- **Designed** "Smart Context" logic to split documents into logical sections (Intro/Body/Conclusion) rather than arbitrary chunks, improving answer quality.
- **Solved** the issue of slow response times by implementing a progressive loading system that delivers summaries instantly while generating complex answers in the background.

Virtual Try-On System | Python, PyTorch, GANs

Aug 2024 – Jan 2025

- **Developed** a virtual try-on application using **U-Net** and **Conditional GANs** to map clothing items onto user images while preserving texture.
- **Implemented** Thin-Plate Spline (TPS) algorithms to align garments correctly with different body poses.
- **Reduced** image generation time by **40%** (down to ~20 seconds) by optimizing the inference pipeline for standard hardware.

ACHIEVEMENTS

Top 200 in Amazon ML Challenge

HackOn with Amazon : Finalist

Certifications: Oracle Certified Generative AI Professional, Oracle Certified Data Science Professional.

LEADERSHIP

Event Lead

Sep 2023 – Nov 2024

EDU4U Club, VIT Bhopal

- Organized technical hackathons and workshops, managing logistics and scheduling for **500+ attendees**.