Faijan Khan

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Education

VIT Bhopal University Oct 2022 – May 2026
B.Tech in Computer Science *CGPA: 8.31*

Experience

Data Science Intern Jan 2025 – Present
Sabudh Foundation *Remote*

- Built automated computer vision pipeline analyzing 540+ frames from NBA highlights to detect advertising placements using Python and OpenCV.
- Developed end-to-end video processing system extracting insights from YouTube sports content at scale with machine learning models.
- Achieved 85% accuracy in brand detection through deep learning techniques, delivering automated advertising analytics solution from raw video to dashboard.

Projects

NBA Advertisement Analysis | *Python, TensorFlow, YOLO, OpenCV, Keras-Ocr* Feb 2025 – Present

- Developed AI-powered computer vision system to automatically detect and track advertisements in NBA game videos using YOLO and CNN models, achieving 85% accuracy in brand recognition.
- Implemented OCR text extraction pipeline with Tesseract, processing digital billboards and courtside banners to identify brand names with 88% precision across diverse video conditions.
- Built automated analytics dashboard that processes 2+ hours of game footage, generating detailed reports on ad visibility duration and brand exposure metrics for marketing teams.
- Designed scalable video processing pipeline using OpenCV and FFmpeg, reducing manual ad tracking workflow by 90% and enabling real-time analysis of sports footage.

Virtual Try-On System | *Python, PyTorch, U-Net, TPS, cGAN, OpenPose, Google Colab* Aug 2024 – Jan 2025

- Developed photo-realistic virtual try-on system using U-Net generator with residual blocks and Conditional GAN framework, achieving high-quality garment transfer with preserved texture and details.
- Implemented Thin-Plate Spline (TPS) Grid Generator for spatial garment warping, enabling accurate clothing alignment with diverse body poses and shapes across multiple datasets.
- Optimized inference pipeline to generate try-on results in 20 seconds, improving runtime efficiency by 40% through lightweight model execution and streamlined preprocessing.
- Deployed interactive system via Google Colab notebook with zero local installation requirements, providing seamless user experience for 1,000+ users with pose estimation and segmentation integration.

Extracurricular Activities

EDU4U club Sep 2023 – Nov 2024
Event Management Lead *VIT Bhopal*

- Led and organized 10+ events, managing teams of 10+ members and ensuring successful execution, while developing key skills in leadership, team management, and problem-solving.

Project Expo
Industry Conclave hosted by VIT Bhopal

- Shortlisted for a project demonstration to a panel of industry experts, presented the project and received valuable feedback from professionals, enhancing project visibility and impact.

Skills

Languages: Python, JavaScript, SQL, HTML/CSS, Java
Frameworks & Libraries: PyTorch, TensorFlow, OpenCV, YOLO, U-Net, Pandas, Scikit-learn, Matplotlib, FastAPI, Gradio
Machine Learning & AI: Computer Vision, Deep Learning, CNN, Conditional GAN, Keras-Ocr, OpenPose, Object Detection, Pose Estimation
Developer Tools: Git, Docker, Visual Studio Code, Google Colab, Jupyter, FFmpeg
Databases & Cloud: MySQL, PostgreSQL, AWS, Google Cloud Platform