Muhammad Ahmad

Machine Learning | Computer Vision

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Summary

Results-driven Machine Learning Engineer with over 1 years of experience building and deploying AI-driven solutions. Specialized in computer vision, generative AI, and deep learning with hands-on expertise in Stable Diffusion, GANs, and cloud-based model deployment. Proven ability to lead end-to-end AI projects, optimize model performance, and develop production-grade applications.

Experience

GOFTECH **Jun 2024 – Aug 2024**

ML / CV Engineer Islamabad, PK

- Developed a Hair Color Transformation tool using StyleGAN2 and custom hair segmentation for accurate, frame-wise color editing and full video synthesis.
- Created an AI Makeup Artist system leveraging DeepLabv3 for facial landmark detection with real-time virtual makeup application and video reconstruction.

Education

COMSATS University Islamabad, Wah Campus **Feb 2021 - Jan 2025**

Computer Science Bachelors

Final Year Project

Next GEN Video Cartoonizer - Stable Diffusion, ESRGAN, React.js, Flask

- Built a video-to-3D cartoonizer using Stable Diffusion and ESRGAN for enhanced visuals.

Skills

Programming

Python, JavaScript (React.js), Flask

Machine Learning

Supervised & Unsupervised Learning, Feature Engineering, Model Optimization

AI/ML Frameworks

PyTorch, TensorFlow, OpenCV, scikit-learn

Specialties

Computer Vision, Diffusion Models, GANs, Image & Video Processing, Generative AI

Cloud & Deployment

AWS, Docker

Projects

Brain Tumor Classification (ML/ CV)

- Trained a ResNet-50 model to classify brain MRIs into four categories glioma, meningioma, pituitary tumor, and no tumor achieving high accuracy on a labeled medical dataset.

Music Genre Classification & Recommendation System (ML, Audio Processing)

- Designed a Feedforward Neural Network (FNN) trained on the GTZAN dataset to classify music genres from uploaded audio files and provide intelligent song recommendations.

Text-to-Speech System (NLP)

- Built a real-time text-to-speech pipeline integrating natural language preprocessing and deep voice synthesis models for lifelike audio generation.

Animate Still Images

- Developed an animated portrait generator using Stable Diffusion and ControlNet to animate static images based on facial motion prompts and text input.