Muhammad Naeem

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Education

Comsats University Islamabad, Pakistan January 2021 – December 2022

Bachelors of Science in Computer Science

Relevant Coursework: Data Structures and Algorithm, Digital Image Processing, Machine Learning, Computer Vision, Pattern Recognition

Skills

Languages: Python, C++, HTML/CSS, MySQL

Libraries: NumPy, Pandas, OpenCV, Scikit-learn, Matplotlib, Dlib

Frameworks: PyTorch, Keras, TensorFlow, Bootstrap, FastAPI

Tools & Technologies: Git, Docker, AWS, GCP

Experience

NineSol Technologies April 2023 – Present 2020

AI Developer

- I have designed and deployed numerous Computer Vision and NLP models as backend solutions for both mobile and web applications.
- Proficient in developing cutting-edge backend solutions for mobile applications, leveraging a wide array of Computer Vision and NLP models.
- Expertise includes a range of innovative projects in the realm of application technologies, encompassing features like Background Removal, Colorization, Document Scanning, Virtual Try-on, and more as detailed in my portfolio.
- Utilized the latest trends and technologies to implement advanced Computer Vision and NLP models, enabling the seamless integration of diverse and engaging functionalities in multiple applications.
- Tools: Python, PyTorch, TensorFlow, YOLO, OpenCV, Keras, FastAPI, AWS, GCP

Projects

Weed Detection Robotic Car

Tech Stack: YOLO, TensorFlow, Flask, Tkinter, VS code, Colab, Roboflow, labelimg

- Created a web app for weed classification and integrated it into a robotic car for laser-based weed elimination.
- Developed a web app for AI-powered weed classification. Integrated weed detection with a laser-equipped robotic car prototype.
- Automated weed detection for eco-friendly agriculture. Improved crop yield through weed control. User interface for remote monitoring and control.

Background (Remove or Change)

Tech Stack: Python, PyTorch, TensorFlow, NumPy, Scikit-Learn, OpenCV

- Remove and change the background of Object in an image.
- Easily remove or replace image backgrounds.
- Ensure accurate object isolation and enhanced image quality.

Colorize Gray scale Image

Tech Stack: Python, PyTorch, TensorFlow, FastAPI, Colab, VS code

- Automated Colorization: Developed a program for instant colorization of grayscale images using advanced algorithms for efficiency and high-quality results.
- Historical Restoration: Revitalizes historical visuals by adding color to black and white imagery, preserving their significance and enhancing their appeal.

Auto-Generated Meeting Reports with AI Scrum

Tech Stack: Python, Azure, GPT, PyTorch, TensorFlow, FastAPI, Colab, VS code

- Live Meeting Transcription: Performs real-time meeting transcription, distinguishing between speakers using voice recognition.
- Automated Report Generation: Automatically generates and emails detailed meeting reports to each member at the end of the meeting.

Document Scanner

Tech Stack: Python, OpenCV, PyTorch, TensorFlow, FastAPI, Colab, VS code

- Scanning: Effortlessly scan, dewarp, and structure documents with automatic image correction and easy organization.
- Make Document: Create Pdf of your scanned images.

Sky Changer

Tech Stack: Python, PyTorch, TensorFlow, FastAPI, Colab, VS code

- Change Sky in an image using reference sky image.
- Replacement: Effortlessly swap the background skies in your images with reference sky images to enhance visual appeal and creativity.

AI Art Generation

Tech Stack: Python, PyTorch, TensorFlow, FastAPI, Colab, VS code

- An image generator based on the concept of Diffusion Models.
- AI Art Creation: Utilized Diffusion Models to power an AI Art Generator, capable of producing sophisticated, high-quality images.

Face Swap

Tech Stack: Python, Dlib, PyTorch, TensorFlow, FastAPI, Colab, VS code

- Face Swap in an image using reference face image.
- Swapping Capability: The project allows users to seamlessly swap faces in images by selecting a "from image" as the source face and a "to image" as the target image where the face will be replaced.

Talking Image

Tech Stack: Python, Dlib, PyTorch, TensorFlow, FastAPI, Colab, VS code

- Reference: Utilize a reference video featuring speaking and moving subjects as the basis for creating animated images.
- Lip-Sync Technology: Implement advanced lip-sync technology to synchronize the image's mouth movements with the speech in the reference video, achieving a lifelike talking effect.
- Image Animation: Apply animation techniques to make the image move in a natural and fluid manner, closely replicating the actions in the reference