Irsal Khan

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Date of birth: 15/03/1998 **Nationality:** Pakistani

ABOUT MYSELF

A passionate Machine Learning Engineer with 1.5 years of experience, specializing in Python, TensorFlow, and PyTorch. I have a strong background in developing and deploying NLP and computer vision applications. My goal is to contribute to innovative, data-driven solutions in a forward-thinking organization while continuing to advance my expertise in machine learning and AI.

WORK EXPERIENCE

[01/11/2023 – Current]

ML/AI Engineer

Metex Labz

City: Islamabad | **Country:** Pakistan

- Design and deploy machine learning models for computer vision and NLP applications.

- Clean, engineer, and augment data for model training

- Fine-tune algorithms for improved accuracy and performance.

- Implement coreference resolution and other NLP techniques for better context understanding.

- Lead projects on landmark detection, object placement, and wise cloning.

- Build APIs for seamless integration of ML models into web applications.

[26/10/2022 – 09/11/2023]

EDI analyst

Sequel Technologies

City: Islamabad | **Country:** Pakistan

- Extract, clean, and transform EDI data for Machine Learning models.

- Collaborate on developing ML models for trend analysis, and process optimization.

- Improve EDI processes based on data-driven insights.

[01/07/2023 – 01/09/2023]

Python Backend Developer Internship

99 Technologies

City: Islamabad | **Country:** Pakistan

- Develop and maintain backend services and APIs using Python.

- Write clean, efficient code and participate in code reviews.

- Support testing, deployment, and documentation processes.

PROJECTS

Pre Instructed Transformers (PITs)

- Built a web-accessible PDF chatbot using Streamlit with coreference resolution.

- Implemented PDF text extraction and Chroma vector DB for search.

- Used HuggingFace embeddings for relevant responses.

- Integrated multiple agents for diverse functionalities.

Aging and De-Aging Application

- Developed a web-accessible Aging and De-Aging application.

- Transformed images using advanced AI techniques.

- Achieved realistic aging and de-aging effects.

- Ensured natural results with attention to detail.

SmartData Insights

- Transforms raw data into actionable insights.

- Automates data cleaning and feature extraction.

- Utilizes supervised and unsupervised learning models.

- Provides intuitive visualizations and recommendations.

- Improves decision-making efficiency.

AI Product Photography

- Developed an AI Product Photography application.

- Transformed standard images into professional product shots as per user prompts.

- Utilized AI Stable Diffusion for template-based image enhancement.

- Focused on achieving high-quality, isolated product visuals.

Facial Landmark Detection System

- Developed a facial landmark detection system using Mediapipe.

- Created a precise mask for lips based on detected facial landmarks.

- Implemented image processing to handle various facial feature enhancements.

- Enabled real-time visualization of the generated lips mask.

Lip Sync Video Generator

- Lip sync technology that matches spoken text with synchronized lip movements.

- Processes videos by trimming, resizing, and extracting audio for synchronization.

- Integrates text-to-speech models to generate speech in multiple languages.

- Web-accessible API for users to upload videos, provide text, and receive synchronized output.

Youtube Live Videos Scrapping

- Web scraper for extracting live streaming data from YouTube using Selenium and BeautifulSoup.

- Utilizes NLP with spaCy to identify and extract location information from video titles and descriptions.

- Geocodes extracted locations to obtain latitude and longitude coordinates.

- Supports multiprocessing to handle multiple URLs concurrently..

AI Sketch2Art

- FastAPI application for sketch-to-art transformation using AI StableDiffusion.

- Processes images with authentication via API key.

- Resizes and converts images to base64 for AI model input.

- Uses AI models for image enhancement based on prompts.

- Returns the resulting art image in PNG format.

Voice Cloner

- FastAPI app for voice cloning and video creation.

- Extracts and processes audio to generate cloned voice.

- Combines voice with an image to produce a video.

- Delivers the video via streaming.

Trends-Scrapper

- Scrapes trending videos from multiple sources using Selenium and BeautifulSoup.

- Categorizes videos by duration: shorts, movies, or random.

- Utilizes multi-threading to efficiently gather and process video data.

- Compiles and converts video information into a structured JSON format.

DIGITAL SKILLS

My Digital Skills

Skills

Python | AI | Machine Learning | Deep Learning | NLP | LangChain | LlamaIndex | Llama | TensorFlow | Scikit-Learn | PyTorch | Computer Vision | StableDiffusion | RAG | Vector Databases | OpenCV | Pandas | Numpy | Matplotlib | BeautifulSoup | Selenium | Scrapy | REST APIs | Fast APIs | SHA | Git | Docker

CERTIFICATES

Machine Learning Specialization Stanford University | Coursera

Google Crash Course On Python | Coursera

Visualization with Python | Coursera

Working With Databases | Coursera

EDUCATION AND TRAINING

[01/09/2017 – 24/04/2022] **BS Computer Science**

Abdul Wali Khan University Mardan (AWKUM)

City: Mardan | **Country:** Pakistan |

HOBBIES AND INTERESTS

Playing Cricket and Badminton, Reading Books, Watching movies, Travelling,

LANGUAGES

English, Urdu , Pashto