Muhammad Hisan Usman

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WORK EXPERIENCE

CARECLOUD MTBC – ISLAMABAD, PAKISTAN

IT INTERN – 24/03/2025 – CURRENT

• Working under the supervision of CTO CareCloud, I'm developing a Voice AI Agent that can converse with customer representatives in real-time, transcribe their audio using STT models, evaluate the performance based on different KPIs, and generate an ideal call using Gemini and TTS models.

NATIONAL UNIVERSITY OF COMPUTER & EMERGING SCIENCES – ISLAMABAD, PAKISTAN

TEACHING ASSISTANT – 20/01/2025 – CURRENT

• Working as a teaching assistant in the course of Digital Image Processing and assisting in organizing seminars.
• Responsible for clarifying concepts to students and grading their assignments and quizzes.

TERADATA – ISLAMABAD, PAKISTAN

MACHINE LEARNING INTERN – 24/06/2024 – 03/08/2024

• Created deep learning models leveraging Teradata Vantage with teradataml for large-scale financial analytics, and separately with sklearn for various deep learning workflows.
• Developed the entire data science pipeline—from preprocessing and feature engineering to model training and evaluation.
• Harnessing Teradata's in-database analytics capabilities, I optimized workflows for handling vast datasets while ensuring scalable and efficient model development.

NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES – ISLAMABAD, PAKISTAN

TEACHING ASSISTANT – 20/06/2024 – 12/08/2024

• Worked as a part-time teaching assistant, in the course of Parallel and Distributed computing.
• Explained and reinforced concepts that were taught in class, as well as grading quizzes and assignments.

NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES – ISLAMABAD, PAKISTAN

LAB DEMONSTRATOR – 25/09/2023 – 25/12/2023

• Checked lab tasks and assignments of students.
• Helped conduct coding tasks and resolved any errors encountered by students.

SYSTEMS LIMITED – ISLAMABAD, PAKISTAN

ARTIFICIAL INTELLIGENCE INTERN – 20/07/2023 – 19/09/2023

• Automated the data-science pipeline by removing the need for ML Engineers to write code for machine learning tasks.
• Allowed users to view numerous interactive graphs, evaluate and save trained models, at just the click of a few buttons.
• Improved the efficiency and performance of ML Engineers by saving time and allowing to focus more on other tasks like feature crossing, model performance improvement.

RAPIDEV – ISLAMABAD, PAKISTAN

MACHINE LEARNING INTERN – 20/06/2023 – 19/07/2023

• Worked with a team of ML Engineers to automate object detection for a Saudi Military project.
• Used computer vision and trained the model to automatically identify/detect different vehicles from cameras and drones.
• Annotated multiple objects which included images from different angels, leading to a 53% improvement in model accuracy.

DATA BI – ISLAMABAD, PAKISTAN

DASHBOARD & ANALYTICS INTERN – 16/01/2023 – 31/01/2023

• Analyzed large dataset of various companies by using Tableau and Power BI.
• Presented reports and insights to the clients, which allowed them to make better business decisions effectively.

EDUCATION AND TRAINING

01/09/2021 – CURRENT Islamabad, Pakistan
BACHELOR OF SCIENCE (ARTIFICIAL INTELLIGENCE) National University of Computer and Emerging Sciences

Website https://www.nu.edu.pk/ | **Level in EQF** EQF level 6

SKILLS

Generative AI | Agentic AI | Large Language Models | Natural Language Processing | Computer Vision | Machine Learning | Data Science | Deep Learning | Data Engineering | MLOPS | huggingface transformers | PyTorch | Tensorflow | Numpy | OpenCV | Matplotlib | Scikit-Learn | Python | Pandas | Apace Airflow | HTML/CSS

PROJECTS

20/01/2025 – CURRENT
AI Agent for University Portal

Creating an AI agent that automates university portals for instructors, lecturers, and professors by allowing them to upload a PDF file of their classroom records, with AI handling result generation, emails, and other tasks. Instead of teachers manually spending time on these small tasks, the agent will perform all the calculations and functions itself, saving time and improving efficiency for teachers.

19/08/2024 – 16/04/2025
CCTV Surveillance using Computer Vision and Generative AI

This project uses a multi-modal approach to detect violent activities in CCTV footages using vision transformers, along with scene understanding through CLIP and automatic AI report generation via LangChain and GPT. It also consists of criminal detection system, trained by fine-tuning DeepFace. To accurately pin-point the person involved in the activities, pose estimation models have also been used.

20/11/2024 – 09/12/2024
Deep Learning for Custom Emoji Generation from Facial Expressions

Developed a deep learning model which uses GANs and Generative AI to create real-time emojis based on the facial expressions of user.

10/11/2024 – 17/11/2024
Human Action Recognition with Vision Transformer

The Vision Transformer (ViT) model, traditionally used for image classification, has been fine-tuned to recognize actions from short video clips (taken from HMDB Dataset). By learning patterns across frames, the model distinguishes among multiple action classes. By extracting frames from videos, preprocessing them, and fine-tuning a ViT model, we aim to classify actions accurately with a target accuracy of 90% (accuracy of 95% achieved on training & testing set, each).

21/10/2024 – 14/11/2024
Sign Language Detection and Audio Generation

Trained a Convolutional Neural Network (CNN) model to automatically detect sign language gestures and form properly constructed sentences using GPT API. Next, to produce audio from the generated sentences, I employed ElevenLabs with gtts as a fallback.

24/06/2024 – 03/08/2024
Machine Learning Model for Credit Score Classification

Created a machine learning workflow using scikit-learn to classify credit scores into three categories. The objective was to build a robust classification model that accurately predicts the credit score category of individuals based on their financial behavior and related features. The entire workflow includes preprocessing, model training, hyperparameter tuning, an evaluation.

15/04/2024 – 27/04/2024
Diet Planner with AI and LLM's

Trained a K-means clustering model to predict the weight status of a patient and then plan his/her diet, using LLM's, accordingly.

10/11/2023 – 05/12/2023
Stock Price Prediction with LSTM (Reinforcement Learning)

Trained a Long-short-term-memory (LSTM) model on the stock price of Google and used an API for live stock prediction.