Muhammad Hisan Usman

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WORK EXPERIENCE

[24 Jun 2024 – 3 Aug 2024]

Data Science Intern

Teradata

City: Islamabad | **Country:** Pakistan

- 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 data 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.

[20 Jun 2024 – 12 Aug 2024]

Teaching Assistant

National University of Computer and Emerging Sciences

City: Islamabad | **Country:** Pakistan

- Worked as a part-time teaching assistant, in the course of Parallel and Distributed computing.
- Explained and reinforced concepts that were taught in the class.
- Graded quizzes and assignments based on the knowledge and understanding of students.

[25 Sep 2023 – 25 Dec 2023]

Lab Demonstrator

National University of Computer and Emerging Sciences

City: Islamabad | **Country:** Pakistan

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

[20 Jul 2023 – 19 Sep 2023]

Artificial Intelligence Intern

Systems Limited

City: Islamabad | **Country:** Pakistan

- Developed a web application that removed the need for ML Engineers/Data Analysts to write code for training models, visualizing data, and exploring datasets.
- Allowed users to view numerous interactive graphs, evaluate and save trained models (classification & regression both), 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.

[20 Jun 2023 – 19 Jul 2023]

Machine Learning Intern

Rapidev

City: Islamabad | **Country:** Pakistan

- 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 hundreds of objects which included images from different angels, leading to an improved accuracy of the model.

[16 Jan 2023 – 31 Jan 2023]

Dashboard & Analytics Intern

Data BI

City: Islamabad | **Country:** Pakistan

- Analyzed data of different 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

[1 Sep 2021 – Current]

Bachelor of Science (Artificial Intelligence)

National University of Computer and Emerging Sciences https://www.nu.edu.pk/

City: Islamabad | **Country:** Pakistan | | **Level in EQF:** EQF level 6

DIGITAL SKILLS

My Digital Skills

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

PROJECTS

[19 Aug 2024 – Current] **CCTV Surveillance using computer vision and Gen AI**

Developing an advanced surveillance model which will immediately detect violent activities, recognize criminals, and implement scene understanding for automatic report and calls to authorities.

[14 Oct 2024 – Current] **Deep learning for custom emoji generation from facial expressions**

Creating a deep learning model which will be using generative ai (GAN's) to create emojis based on the facial expressions.

[1 Oct 2024 – Current] **Sign language detection and audio generation**

Training a model to automatically detect sign language gestures and form proper sentences. Will also include the feature of audio generation using text to-speech models.

[10 Nov 2024 – 17 Nov 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).

Link: https://github.com/hisanusman/Vision-Transformer-for-Human-Activity-Recognition

[24 Jun 2024 – 3 Aug 2024] **Machine Learning Model for Credit Score Classification**

Created a machine learning workflow using scikit-learn to classify credit scores into three categories: "Good", "Standard", and "Poor". 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 data preprocessing, model development, hyperparameter tuning, evaluation, and model interpretation.

Link: https://github.com/hisanusman/Credit-Score-Model

[15 Apr 2024 – 27 Apr 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.

Link: https://github.com/hisanusman/Diet-Planner-with-Unsupervised-learning-and-LLMs

[10 Nov 2023 – 5 Dec 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.

Link: https://github.com/hisanusman/Stock-Price-Prediction-Google-