Muhammad Azam Afridi

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Education

Bachelor of Science in Artificial Intelligence Sep. 2020 – Jun 2024
Ghulam Ishaq Khan Institute of Engineering Sciences and Technology *Topi, Pakistan*
GPA: 3.7/4

Higher Secondary School Jan. 2018 – Jun 2020
Pakistan School Salalah *Salalah, Oman*
Final grade: A1

Experience

Machine Learning Intern 20 Jul 2023 – 26 Aug 2023
TanXor *Islamabad, Pakistan*

- Developed a machine-learning pipeline for forecasting Walmart store and department monthly sales, using the M5 store-department dataset achieving.
- Conducted data cleaning, transformation, and feature engineering for time series data.
- Trained deep learning models with TensorFlow, optimizing hyperparameters with KerasTuner for accuracy.

Python Intern 19 Jun 2023 – 31 Jul 2023
Kavtech Solutions (Private) Ltd *Lahore, Pakistan*

- Built data engineering pipelines using Python Panda's and Pentaho software.
- Successfully automated Pentaho reports and jobs with Python's Pandas library, enhancing data processing efficiency.
- Developed proficiency in Amazon Web Services (AWS), including storage solutions, deployment strategies, and efficient data management.
- Gained expertise in API integration using Flask and Django.

Projects

Multilingual Video Translator And Chatbot Application Jun 2023 – May 2024

Designed and implemented a web application that enables users to translate videos from non-native languages to their native language, utilizing state-of-the-art AI models. Additionally, incorporated a context aware chatbot that responds to queries based on information extracted from uploaded videos.

- Integrated OpenAI's Whisper for speech-to-text, Meta's NLLB model for text translation, and Microsoft Azure's Speech API for multilingual speech translation.
- Fine-tuned the 'T5' model for enhanced text translation.
- Developed an intelligent chatbot using LLMs, employing RAG (Retrieval augmented generation) technique for context-driven answers.
- Configured Azure's nct4-v3 Virtual machine and deployed the application on it.

End To End Data Analytics Project | *Pandas, Power BI, Power Query* 12 Nov 2023

A complete data analytics project, utilizing data analysis techniques to assemble the optimal cricket team of 11 players. The project involved analyzing player statistics available on https://www.espncricinfo.com/.

- Scraped data using Python's Beautiful Soup for accurate extraction of player statistics.
- Employed Pandas for robust data preprocessing and Microsoft's Power Query for sophisticated transformation.
- Created an interactive Power BI dashboard for intuitive and visually compelling exploration of analyzed cricket data.

Movie recommender system using Machine Learning | *Nltk,Pandas, Django*

Utilized TF-IDF vectorization to develop a content-based movie recommender system based on the 'TMDB 5000 Movie Dataset.' This system incorporates user preferences and sentiment analysis to offer personalized movie suggestions, thereby simplifying the discovery of new titles and enhancing the overall movie-watching experience.

Driver drowsiness detection application using CNN & YOLO | *OpenCV, Tensorflow, Roboflow*

Developed an AI-driven driver drowsiness detection system using CNNs to assess drowsiness based on facial features. The system proactively alerts the driver with an alarm when drowsiness surpasses a predefined threshold, enhancing road safety.

Online Courses

Specialization in Deep Learning
Coursera

Specialization in Machine learning
Coursera

Intro to ML on AWS
Coursera

Honors and Awards

Dean's Honor Certificates
Six-time recipient of academic honors at GIK Institute.

Position in Higher Secondary Education
Secured the third position in the HSSC Examination at PSS.

Technical Skills

Languages: Python, C/C++, SQL (Oracle, Mysql), JavaScript, HTML/CSS
Developer Tools: Git, Docker, AWS, Azure, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: Pandas, NumPy, Matplotlib, keras, tensorflow, kerastuner, nltk, langchain, llama index, pytorch, opencv, BeautifulSoup, django, flask, tkinter, streamlit, seaborn, scikitlearn, PyCaret