UMER ARSHAD

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EDUCATION

Data Science and Machine Learning Coursework   **Sept 2023 - Present**
- Earned Google Advanced Data Analytics, Machine Learning, and Deep Learning Specializations (Coursera), developed proficiency in Python (Pandas, NumPy), SQL, TensorFlow, and Scikit-learn for data analysis, predictive modeling, and neural networks.
- Completed HarvardX CS50 for foundational algorithms and Python for Everybody (University of Michigan) for data scraping, cleaning, and API integration.
- Certified in TensorFlow Developer and Natural Language Processing (DeepLearning.AI), with advanced skills in transformer models, RNNs, and text analytics.

National University of Sciences and Technology (NUST), Pakistan   **Sept 2015 – July 2019**
Bachelors of Science in Civil Engineering

TECHNICAL SKILLS

Languages: Python, JavaScript, C, SQL, MATLAB

Libraries & Frameworks: Numpy, Pandas, scikit-learn, TensorFlow, Keras, Matplotlib, Plotly, Flask

Databases: MySQL, SQLite

PROJECTS

Global Temperature Analysis
- Developed an LSTM model using TensorFlow to forecast global temperature trends, optimized hyperparameters to achieve a 20% reduction in validation mean squared error (0.08) compared to the baseline. Created an interactive dashboard to visualize temperature projections.

Car Recognition Image Classifier from Scratch
- Developed an automated web scraper using Selenium and BeautifulSoup to extract car images and from Pakwheels.com, collecting over 40,000 raw images. Cleaned the dataset and created a data pipeline using TensorFlow to build and train an image classifier for car recognition.

Recommendation systems
- Designed and implemented a course recommender system. Developed content-based recommender systems using NLP techniques such as Bag of Words and cosine similarity to quantify course relevance.
- Developed collaborative filtering-based recommender system using KNN and predicted course ratings using neural networks.

WORK EXPERIENCE

National Highway Authority   **Islamabad, Pakistan**
Junior Engineer   **Mar 2020 – Nov 2023**
- Managed contractual and legal communications with stakeholders, efficiently administered project data to streamline claim management processes and generated valuable insights for decision-makers. Successfully resolved Claims worth about PKR 20 billion.

Tanawal Traders   **Islamabad, Pakistan**
Assistant Manager   **Jan 2017 – Present**
- Managed end-to-end trade operations for key commodities (e.g., wheat, sugar, oil), including procurement, pricing negotiations, logistics coordination, and cash flow monitoring.
- Analyzed market trends and pricing strategies to optimize profits, while expanding supplier/buyer networks by fostering relationships with farmers, brokers, and distributors.

LEADERSHIP AND ACTIVITIES

NUST Olympiad   **Islamabad, Pakistan**
Coordinator Resources   **Sept 2018 – Mar 2019**
- Managed finance, logistics, social events and accommodations of a national-level event while leading a team of 200+ students in affiliation with the student affairs department of NUST. Successfully brought a record-breaking intake of a 5000+ audience and a profit generation of PKR 2.3 million.

The Adventure Squad   **Islamabad, Pakistan**
Founder   **May 2017 – July 2019**
- Implemented data-driven strategies by analyzing market trends and customer data to strategically plan tour destinations and optimize itinerary schedules, resulting in improved customer retention and fostered business growth.

NUST Community Services Club   **Islamabad, Pakistan**
Member   **Sep 2016 – May 2019**
- Volunteered in different community service projects in NUST including but not limited to Al-Qalam (a fundraising initiative aimed at supporting underprivileged individuals) and Street Store (a project dedicated to collecting and distributing clothes to those in need).