

# Muhammad Umar Amanat

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## Summary

As an experienced Data & AI Engineer with 5 years of expertise, I have successfully led and completed multiple projects in various industries, including automotive, retail, manufacturing, finance, fashion, and hospitality on AWS, Azure, and GCP. With my deep understanding of big data, machine learning algorithms, probability, statistical analysis, and data visualization, I have consistently delivered challenging solutions and brought profits to businesses.

## Experience

### **Sr. Data & AI Engineer at “Royal Cyber”, Pakistan**

Mar 2022 - Present

In this role, I am leading a team of Data Scientists and Data Engineers, and providing consultancy on the Databricks platform to clients of Royal Cyber.

- Lead a real-stream fraudulent detection project that helps businesses in detecting 100plus fraudulent transactions daily.
- Managed unified Azure-Databricks solution for migrating streaming data pipeline from Confluent Kafka to Azure EventHub. Production and consumption rate in a second is 0.5 MB and 1 MB respectively.
- Implemented a deep learning-based sales forecasting project on AWS Sagemaker resulting in cost savings of approximately \$1000/month for a retail client.
- Lead and completed a Unified Analytics project on Databricks, enabling ML and Analytics teams to optimize production assembly lines across 40 plants in the US.
- Created an optimized data pipeline built in Databricks. These pipelines were optimized using Delta Live tables and time was reduced from 75 minutes to 25 minutes

### **Data & AI Consultant at “The Entertainer FZ LLC”, Dubai**

Sep 2020 – Feb 2022

Contributed directly to the business of Entertainer by leading a team of junior AI and Data Engineers.

- Created a recommendation engine for "The Entertainer" with 20 million user interactions for 13 regions, this increases the revenue of the business by approx 5%.
- Developed a Delta Lakehouse that handles huge amounts of data from more than 5 data sources. This Delta Lakehouse reduces the 30% monthly data management cost.
- Enhanced marketing productivity by 20% through Kepler.gl-powered geospatial dashboard for 13k+ merchants and 200k+ customers.
- Incorporated Hybrid Recommendation Engine in Entertainer’s App. This increases user app time on average from 2 minutes to 5 minutes.
- Managed Entertainer’s Datawarehouse pipeline on the Azure platform using Datafactory which incrementally updates data for 13 different regions in a nightly job.

### **Sr. Machine Learning Engineer at “Systems Ltd”, Pakistan**

Jun 2018 – Sep 2020

My role as Sr. ML Engineer was to provide end-to-end Machine Learning and Deep Learning services for the Systems Limited business.

- Successfully led a sales forecasting project on the Microsoft Azure cloud platform and achieved an accuracy of more than 85% for around 3000 stores.
- Contributed to Data cleansing, and pre-processing data pipeline which cooks the data of 3500 stores for the Sales Forecasting ML engine
- Managed pre and post-ML data pipeline of a churn prediction model on Azure. The AI model used in this project helps the business in retaining more than 50% of its customers.
- Deployed Mozilla Deep Speech algorithm on Google Cloud Platform to transcribe medical data with an accuracy of 90%
- Created a deep learning-based video analytics application for a shopping mall using QT. This model generates more than 8 different kinds of video analytics.
- Created data acquisition, and wrangling pipeline on AWS for car pricing

engine machine learning model

### **Java Developer at “Royal Cyber”, Pakistan**

Aug 2017 – Sep 2017

I was responsible for the development of the Websphere application and handling clients' change requests on Python web applications.

- Implemented some form of front-end application using Angular JS.
- Implemented interaction on Google Mss using Angular JS.
- Managed the backend side of an application using the Python Web2Py framework.

## **Education**

### **University of Engineering and Technology Lahore**

Sep 2020 – Present

Master in Computer Sciences (Specialisation in AI)

### **National University of Computer and Emerging Sciences**

Aug 2013 – July 2017

Bachelor in Computer Sciences

## **Technical Skill**

Proficient in developing end-to-end Data Science and Machine Learning Solutions.

- Programming Languages: **Python, SQL, Java, Javascript, C++**
- Data Science/ML: **Scikit, Pandas, Numpy, Tensorflow, Pytorch, Hugging Face, Turicreate, AWS Sagemaker, Azure ML, MLFlow, SparkMLLib, OpenCV, Statistics, Algorithm, Calculus, Probability, LLM.**
- Data: **Spark, Spark Streaming, Kafka, Databricks, Azure Synapse, AWS Redshift, DataFactory, dbt, Databricks Delta Live Tables, Databricks Jobs, AWS Glue, MS SQL, MongoDB, MySQL, PostgreSQL**
- Data Visualization: **Matplotlib, PyDash, Kepler.GI, Databricks SQL, PyQt, Streamlit**
- Cloud: **Azure, AWS, and GCP**
- Version Control: **Git, Azure DevOps, Jenkins**

## **Soft Skill**

In addition to my technical expertise, I have developed the following soft skills throughout my professional experience.

- Leadership skill
- Communication skill
- Storytelling
- Problem-solving
- Business acumen

## **Industry Experience**

Industry experience in retail, finance, real estate, manufacturing, fashion, and hospitality sectors.

## **Achievements and Certifications**

- Selected for “AWS Community Builder” program
- Databricks Certified Associate Developer for Apache Spark 3.0
- Databricks Certified Machine Learning Associate
- Databricks Certified Data Engineer Associate
- Databricks Certified Data Analyst Associate
- Among the main contributors to MLModel (Machine learning models zoo).
- Gold badge in Python from HackerRank
- Earned more than 25 Coursera certifications in “Data & AI”.

## **Hobbies and Interests**

In my leisure time, I read books, play video games, and football.