

Muhammad Talha

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Education

Bachelor in Computer Science

Fast NUCES

peshawar

2020 - 2024

- Relevant Courses : Data Structure, Algorithm, Data Science, OOP, Computer Modeling, Final Year Project in **Predictive Analytics**.

Experience

Data Science Intern - Asterisc Technocrat

August 2023 - November 2023

- Developed and deployed data preprocessing pipelines to clean and transform large datasets for analysis.
- Built machine learning models to extract actionable insights and solve business challenges.
- Conducted exploratory data analysis (EDA) and presented results using visualization tools like Matplotlib and Seaborn.

Virtual Experience Program Participant – Walmart Global Software Engineering, Forages (Virtual)

- Conducted market research and consumer needs analysis to create data-driven client recommendations.
- Analyzed data to identify trends and patterns, optimizing client-focused strategies.
- Delivered a structured solution approach showcasing problem-solving and data analysis skills.

Projects

Real-Time Traffic Analytics and Dynamic Signaling - [Code](#)

FYP

- Fetched real-time traffic data from Google API and simulated it using SUMO.
- Designed and implemented a real-time data pipeline with Kafka and Spark Streaming.
- *Developed predictive models using SparkML to train a Random Forest Regressor for traffic volume predictions.*
- Displayed *real-time, historical, and predictive analytics* on a Streamlit dashboard.

Classifying Cyber Attacks in Networks - [Code](#)

June 2023

- Applied classification and clustering techniques using Python for detecting and analyzing cyber attacks.
- Performed data aggregation and visualization with pandas and matplotlib.
- Authored a professional report incorporating findings, using LaTeX for documentation.

Detection of Osteoarthritis in Radiographic Images - [Code](#)

2023

- Built a data preprocessing pipeline, including resizing, normalization, noise reduction, and data augmentation.
- Fine-tuned pretrained models with TensorFlow and PyTorch for knee osteoarthritis detection.
- Designed deep learning architectures to enhance model accuracy for image classification tasks.

Skills

- Python | Numpy | **Pandas** | Matplotlib | **C++** | MySQL | Postgres | Git | Linux | **Apache Spark** | **Apache Kafka** | Apache Airflow
- Data Wrangling | Data Visualization | **Machine Learning**.
- **Predictive Analytics** in Traffic Signaling

Certifications

- Data Analysis with Python | Data Science Methodology | Data Science Orientation | Tools for Data Science V2 - [Coursera IBM](#)

Others

• **Data Science Teachers Assistant** - Fast NUCES

2024

Mentored students in Data Science Subject, Teaching different tool and techniques