**Skills** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
• Python | Numpy | Pandas | Matplotlib | C++ | MySQL | Postgres | Git | Linux | Apache Spark | Apache Kafka | Apache Airflow  
• Data Wrangling | Data Visualization | EDA | Dockers .  
• Frontend | Backend | English, Urdu

**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** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Real-Time Traffic Analytics and Dynamic Signaling -** [**Code**](https://github.com/itsMuhammadtalha/Real-Time-Traffic-Analytics-and-Congestion-Control) |  |  |  | **2024** |

• 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.

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| **Classifying Cyber Attacks in Networks -** [**Code**](https://github.com/itsMuhammadtalha/classifying-cyber-attacks-in-network-) |  | **-** |  | **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.

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| **Detection of Osteoarthritis in Radiographic Images -** [**Code**](https://github.com/itsMuhammadtalha/Detection-of-Osteoarthritis-using-Advance-Segmentation-in-Radiographic-Images) |  |  |  | **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.

**Education** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Bachelor in Computer Science** |  | **Fast NUCES** | *peshawar* | **2020 - 2024** |

• Relevant Courses : Data Structure, Algorithm, Data Science, OOP,

**Certifications** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
• Data Analysis with Python | Data Science Methodology | Data Science Orientation | Tools for Data Science V2 -  [Coursera IBM](https://www.credly.com/badges/67dbd099-eb20-49e2-a7e9-246169de1c75/public_url)

**Others** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
• **Data Science Teachers Assistant** - Fast NUCES **2024**

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