

FAIZA IQBAL

Contact: faiza.iqbal@admin.muet.edu.pk [LinkedIn](#) [Portfolio](#)

A highly skilled Data Scientist with strong proficiency in Python programming and extensive experience in Natural Language Processing (NLP), Machine Learning, AI models, and SQL. I have a solid academic foundation with a Master's in Data Science and a track record of contributing to advanced research projects. Adept at managing and analyzing complex datasets, I am passionate about using AI and data-driven insights to drive innovation.

EDUCATION

Master of Science (M.Sc.) in Data Science

Mehran University of Engineering and Technology

CGPA: 3.94/4.00

Thesis: An Explainable AI Approach to Speech-Based Alzheimer's Dementia Screening

Posgraduate First Position Holder

Skills: Explainable Artificial Intelligence, Machine Learning, Handcrafted features

Feb 2023 - Present

Jamshoro, Pakistan

Bachelor of Engineering (B.E) in Telecommunication

Mehran University of Engineering and Technology

CGPA: 3.82/4.00

Thesis: Evaluating feasibility of implementing Homomorphic Encryption

Annual Scholarship Holder, Top 10 Student in Bachelors

Skills: Data Security, Computer Networking, Machine Learning

Oct 2018 - Dec 2022

Jamshoro, Pakistan

WORK EXPERIENCE

Research Assistant - RADAR (Record Access and Data Retrieval Center)

Mehran University of Engineering and Technology

Nov 2023 - Present

Jamshoro, Pakistan

- Manage and analyze large datasets, focusing on university publications and rankings data. Conduct complex database queries to extract insights and trends, directly contributing to data driven decision making processes within the university.
- I am deeply involved in managing and analyzing data collection from diverse university sources, ensuring data integrity and consistency for accurate analysis and reporting. Play a key role in managing data that influences university rankings.
- Developed a user friendly web portal using PHP, HTML, and CSS, enhancing the accessibility of critical data at the RADAR Center. This portal streamlines data retrieval processes, allowing stakeholders to efficiently access and utilize information.

Research Assistant - Examination Department

Mehran University of Engineering and Technology

Nov 2023 - Present

Jamshoro, Pakistan

- Utilized my IT skills in the university's examination department, including database administration, management of website, web portals, and server. I also managed the QOBE software, ensuring its efficient operation for exam processes.
- Developed databases using SQL Server and utilized data analytics tools to gain insights from the examination data.
- Lead an innovative project to transform grading systems and bring about positive change.

PROJECTS

An Explainable AI Approach to Speech-Based Alzheimer's Dementia Screening

- Developed and deployed a machine learning model using Explainable AI techniques to detect Alzheimer's from speech data.
- Applied feature engineering to extract relevant linguistic features and improve model interpretability.
- Performed hyperparameter tuning to enhance model performance and ensure accurate classification of Alzheimer's patients.
Tools: Python, SpaCy, SHAP, LIME.

Sentiment Classification using Advanced Data Analytics for ChatGPT

- Conducted sentiment analysis on ChatGPT related discussions on Twitter, utilizing advanced data visualization techniques to analyze public perceptions.
Tools: Python, Sentiment Analysis, Word Clouds.

NLP-Based Classification and Severity Assessment of Anxiety and Mental Health Conditions

- Developed and deployed a machine learning model to detect Anxiety from speech data.
 - Performed hyperparameter tuning to improve model accuracy, optimizing parameters to ensure better classification performance.
 - Utilized NLP techniques such as topic modeling and word clouds to extract meaningful features from speech data, enhancing the interpretability of the results.
- Tools: Python, Machine Learning, Topic Modeling, Word Clouds.

LANGUAGES

- English (CEFR C1)

SKILLS

Programming Languages: Python, MATLAB, C++, SQL

Libraries: Numpy, Pandas, Matplotlib, NLTK, SpaCy, Scikit-Learn, Keras, TensorFlow, LIME, SHAP

Tools and Technologies: Data Science, Weka, Hyperparameter Optimization, Feature Engineering, Model Selection, SQL Server, Cisco Packet Tracer, eNSP, Linux, Latex, MS Office, PowerBI

PUBLICATIONS

Aslam, A. B., Iqbal, F., Talpur, U., Syed, Z. S., Shaikh, F. K. (2024). Artificial intelligence-enabled 6G mobile systems. In A. Bourdena et al. (Eds.), *Intelligent technologies for healthcare business applications*, pp. 49-79, Springer. https://doi.org/10.1007/978-3-031-58527-2_3

Iqbal, F., Syed, Z. S., Syed, M. S. S., and Syed, A. S., “An Explainable AI Approach to Speech-Based Alzheimer’s Dementia Screening,” in *Speech, Music and Mind 2024 (SMM24), Satellite Workshop of Interspeech 2024, International Speech Communication Association (ISCA)*, 2024, pp. 11-15. <http://dx.doi.org/10.21437/SMM.2024-3>.

CERTIFICATIONS

- Databases and SQL for Data Science with Python
- Python for Everybody
- Huawei ICT Competition (Outstanding Performance)
- PCAP: Programming Essentials in Python
- What is Data Science