# **Muhammad Mobeen**

# **Data Science Intern**

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### **SUMMARY**

Entry Level Data Scientist with a proven track record of developing impactful projects and excelling in competitive environments. Demonstrated strong problem-solving skills through multiple <u>first-place</u> finishes in Inter-University coding competitions. Recognized for academic excellence as a <u>Dean's List</u> member for consecutive semesters. Proven <u>internship experience</u> to work in a team environment or as an independent contributor. Diverse skill set, beyond machine learning to effectively <u>communicate</u> with various departments.

### **EXPERIENCE**

AIM Lab Islamabad, Pakistan

Team Lead and Research Intern

May 2024 – Present

- <u>Co-lead</u> a research initiative with 4 sophomore students, focusing on emotion detection via video and speech analysis; enhanced model accuracy by 20% and communicated findings to the project supervisor.
- Integrated RAVDESS and SURREY audio <u>datasets</u> to train custom CNN Models from scratch which achieved <u>90%</u> accuracy on test data.
- Implemented real-time emotion feedback system utilizing the trained model with 40 ms response time.
- Mapped 7 basic detected emotions to positive and negative personality traits to quantify <u>soft skills</u> such as openness, extrovertness and empathy.

FAST NUCES Islamabad, Pakistan

Teaching Assistant

January 2023 – January 2024

- Teaching Assistant for [CS-2001] Data Structures ('A').
- Teaching Assistant for [CS-2009] Design & Analysis of Algorithms ('A+').
- Created and Evaluated assignments, quizzes and projects for over 120 students.

#### **PROJECTS**

InterviewerPro Islamabad, Pakistan

<u>Streamline the hiring process by providing an automated screening layer</u>

- May 2024 June 2024
- Created and fine tuned various <u>Deep Learning</u> models to detect emotions from facial and audio inputs.
- Utilized <u>NLP</u> spaCy models to parse through candidates CV and generate personalized interview questions.
- Generate a report of candidates emotions over time throughout the interview process to map them into soft skills.

Glaucoma Detection Islamabad, Pakistan

Early stage eye disease detection to prevent permanent visual impairment

April 2024 - May 2024

- Built 2 Convolution Neural Network (U-NET) models and trained them on 500 Retinal Fundus Images.
- Utilized <u>Data Augmentation</u> techniques to increase the dataset by a factor of 4.

Climate Predictor Islamabad, Pakistan

<u>Predicting atmospheric conditions based on 10 input features</u>

March 2024

- <u>Cleaned, pre-processed</u> and merged a <u>large weather dataset</u> containing weather data of 4 years from 2020 2023.
- <u>Visualized</u> input trends and Created a <u>random forest model</u> that achieved a <u>91% accuracy</u> on test data.
- Our solution got <u>First Place</u> in the DataQuest module of AirTech'24 with a prize pool of <u>Rs 50,000</u>.

#### SKILLS

Programming Languages: Python, JavaScript, Java

**Development Tools:** Git, Visual Studio Code, Anaconda, Jupyter Notebook

**Frameworks/Libraries:** TensorFlow, Keras, Scikit-learn, Pandas, Numpy, Scipy, Py-Feat, PyTorch, Librosa, PyAudio, spaCy, matplotlib, OpenCv, Flask

#### **FDUCATION**

#### **FAST National University of Computer & Emerging Sciences**

Islamabad, Pakistan

B.S. in Computer Science Expected Graduation, May 2025

- o **GPA:** 3.48/4.00
- o **Related Coursework:** Artificial Intelligence, Data Structures, Design & Analysis of Algorithms, Database Systems, Object-Oriented Programming, Software Design & Analysis, Software Engineering.

## **OTHER**

Awards & Honors: Winner NUST Science Bee X Speed Programming, Winner AIRTECH '24 DataQuest, Dean's List Certifications: Crash Course on Python (2022), Using Python to interact with OS (2023), Version Control with Git and Github (2023), Introduction to Data Science in Python (2023), Applied Plotting and Charting with Python (2023)