Fardeen Farhat

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Education

FAST NUCES Islamabad, Pakistan
*Bachelor of Artificial Intelligence (CGPA : **3.63**)* *Aug. 2021 – Present*

Projects

Flight Delay Prediction | *Python, Pandas, NumPy, Scikit-learn*

- Developed a predictive model to forecast flight delays, integrating weather and flight data, achieving 70% accuracy for delay predictions.
- Engineered over 10 features and used classification models to achieve 91% binary accuracy and 90% multi-class accuracy, categorizing delays into four groups.
- Optimized models with hyperparameter tuning and validated using k-fold cross-validation, improving accuracy by up to 7%. Utilized Python, Scikit-learn, and advanced data visualization tools.

Speaker Age Prediction Model | *Python, Pandas, Scikit-learn*

- Developed a machine learning model to predict the age of speakers based on audio features extracted from speech signals.
- Preprocessed audio data, applying feature extraction techniques such as MFCC (Mel-frequency cepstral coefficients) to enhance model performance.
- Built and evaluated models using both classical machine learning algorithms.
- Achieved a significant improvement in prediction accuracy, demonstrating the ability to predict age from voice data.

Portfolio Website | *React, TailwindCSS, JavaScript* fardeenfarhat.github.io/portfolio/

- Designed and developed a responsive portfolio website to showcase skills, projects, and achievements.
- Utilized React for dynamic rendering and TailwindCSS for efficient and modern styling.
- Integrated features such as project highlights, downloadable CV, and social media links for user engagement. .

Duck Shooter | *Assembly Languge*

- Developed a 2D shooting game in Assembly, featuring Homer Simpson as the target, with real-time input handling and dynamic difficulty scaling.
- Implemented game logic, sprite animations, and optimized performance using low-level graphics routines and efficient memory management.
- Debugged and tested the game for seamless gameplay across different x86 platforms, incorporating sound effects and score displays.

Technical Skills

Languages: Python, C++, SQL, Bash, JavaScript
Libraries: React, TailwindCSS, Scikit-Learn, NumPy, Pandas, Matplotlib
Developer Tools: Git, GitHub, MongoDB, MySQL, Visual Studio Code, Anaconda, Linux

Awards

Gold Medalist: FAST NUCES Islamabad **Spring 2024**

Rector's List: FAST NUCES Islamabad **Spring 2024**

Dean's List: FAST NUCES Islamabad **Fall 2023, Spring 2023**