

Speech emotion recognition

(A python mini project on Machine Learning)

I have created an ML model which takes short audio files with different emotions as input and predicts the selected emotions for the test dataset which is 25% of the total dataset(1160 audio files).

Speech Emotion Recognition, abbreviated as SER, is the act of attempting to recognize human emotion and affective states from speech. This is capitalizing on the fact that voice often reflects underlying emotion through tone and pitch. This is also the phenomenon that animals like dogs and horses employ to be able to understand human emotion.

I have used Jupyter notebook as my workspace for development and Libraries included are:

- **Librosa:** **LibROSA** is a **python** package for music and audio analysis. It provides the building blocks necessary to create music information retrieval systems
- **Scikit-learn:** **Scikit-learn** (formerly **scikits.learn** and also known as **sklearn**) is a free software machine learning library for the Python programming language.^[3] It features various classification, regression and clustering algorithms including support vector machines, random forests, gradient boosting, k-means and DBSCAN, and is designed to interoperate with the Python numerical and scientific libraries NumPy and SciPy.
- **Numpy:** python data science library which provides objects for multi-dimensional arrays

You can find the audio data through this link:

<https://drive.google.com/file/d/1wWsrN2Ep7x6lWqOXfr4rpKGYrJhWc8z7/view>

The file SER contains all the code