Speech Emotion Recognition

BATCH - 8

SHINING SHIMMERS

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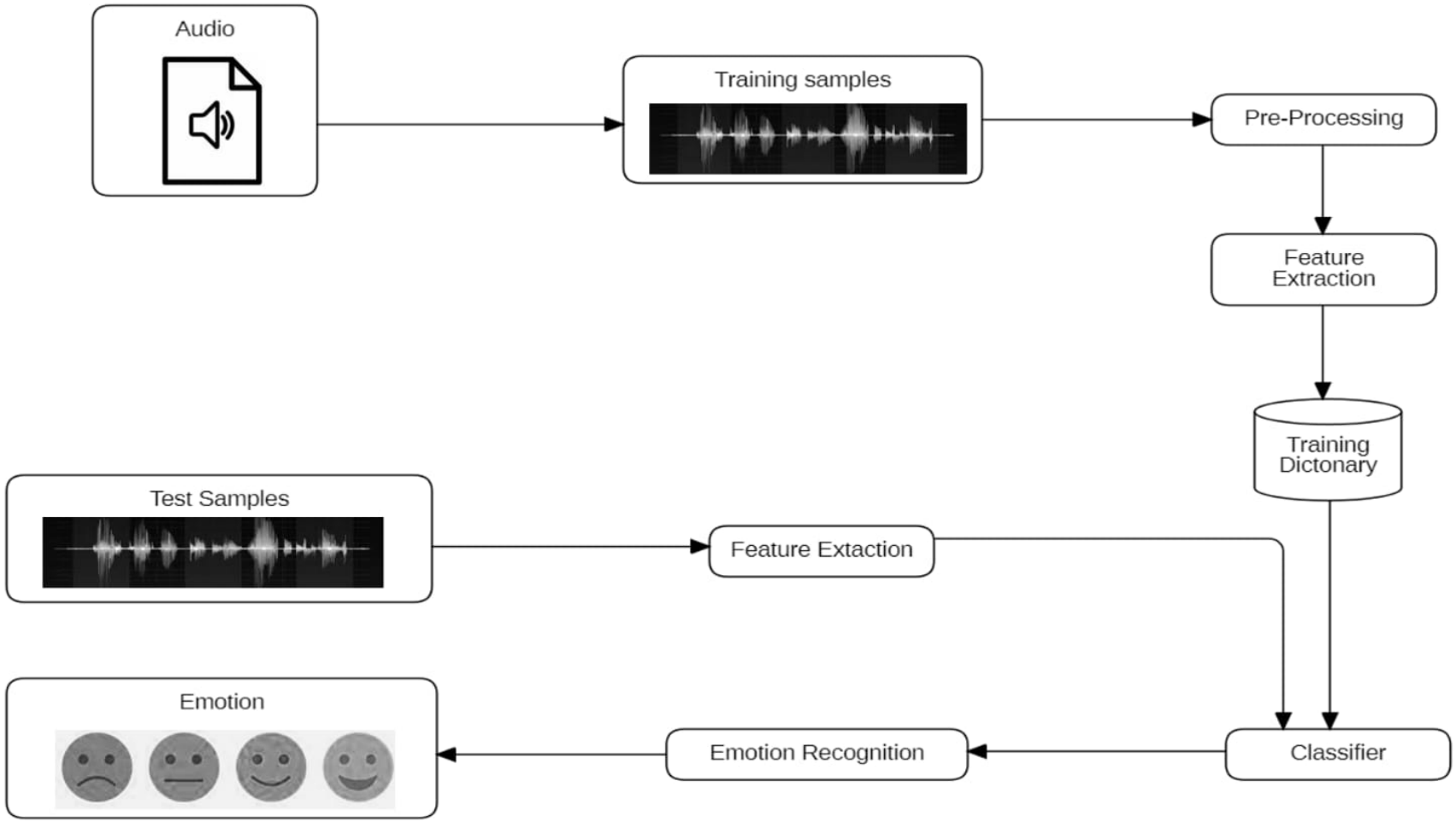
Project Description

- Speech Emotion Recognition, abbreviated as SER, is the act of attempting to recognize human emotion and affective states from speech.
- To build a model to recognize emotion from speech using the librosa and sklearn libraries and the RAVDESS dataset.

Process Flow Diagram



Working

- Installation of necessary libraries like Librosa, sound file, sklearn.
- Data set is uploaded from RAVDESS
- A function is defined to extract features like MFCC, Chroma, mel features from the sound.
- A dictionary is created where all emotions present in the dataset are saved.
- Data set is loaded and splitted into training and test data. MLP classifier and SVM are initialized

Contd.....

- Fit/Train the model.
- Function accuracy-score() gives the accuracy of the model.
- Compare the two models and choose the best model based on high accuracy
- Model serialisation and interface is created using Streamlit.
- User can browse and add files
- By clicking the predict button,emotion is printed

Technical Stack

- Google Colab
- Streamlit
- Github
- LaTeX

Learnings

- Usage of libraries
- Implementation of MLP and SVM algorithms
- Implementation of Streamlit
- Maintenance of Github Repository

Challenges Faced

- Feature Extraction
- Unable to link the model to the input file
- Implementation of Streamlit

Git Repo Link

https://github.com/manasa1004/SHINING-SHIMMERS

Project Statistics

- Github Commits : 31
- Lines of code : 190
- No.of functions : 2

Thank You