Problem Approach For Task 2

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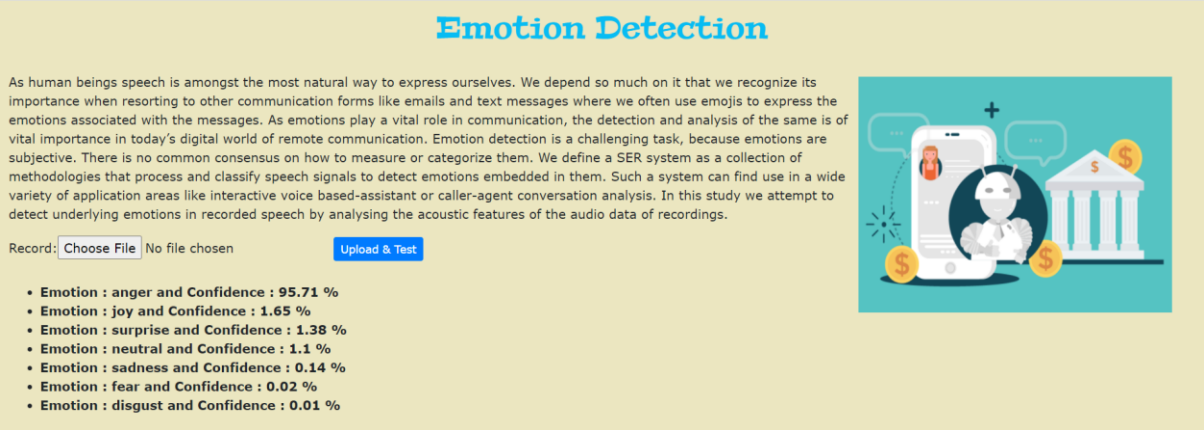
Task 2 –

In this task we had to build a web application using the machine learning models used in task 1.

Brief Explanation

To build the web application, Django framework was used. For this, we had to first create a model API so that we could integrate the models with the website. Below is a screenshot of how the frontend page looks –



The website covers a brief intro about speech emotion recognition. It has the option to upload the audio file (in .wav format) and, in the backend, the uploaded audio file is firstly stored in a media folder. It is then pre-processed using librosa for feature extraction. After that, these extracted features are used by the trained machine learning models to predict the emotions along with the confidence rating. The models (trained on 10-folds of data) take about 15 secs for prediction (may in other local machines depending on CPU power).

We have also uploaded a demo video which shows the commands required to initiate the Django server which is required to run the website. Working of the website as well as the code part have also been covered in the video. Also, the code files along of the web application with the model weights have been uploaded in the zipped folder.

Note – To run the code on another local machine, the paths for the model weights and the audio save location have to be updated in the views.py file in the features folder.