

Automatic Trailer Generation

Order of Execution of Code Files

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Follow the below steps in the given order to generate Trailer from a Movie:

- (1) First extract the audio (mp3) from the movie (mp4) using **ExtractingAudioFromVideo.py** file.
- (2) Extract all the speech segments from the movie using **SpeechExtraction1.py** file.
- (3) From the speech segments extracted in step-2, extract the most impressive speech segments according to their outlier score values using **SpeechExtraction2.py** file. The sum of duration of all the extracted speech segments in this step will be less than or equal to the total duration of speech we want in our trailer.
- (4) **This step is only executed for horror movies:** Convert the audio of the movie from mp3 to wav format using **mp3Towav.py** file and then use **HorrorScenesExtraction.py** file to extract the horror scenes from the movie.

Now, I assume that I have the Speech scenes, the Action/Horror scenes, the Wide scenes, the Title scenes in one folder and the Character scenes in a separate folder, i.e. all the scenes are together in one folder except the Character scenes. The character scenes are stored in a separate folder. This is because we will add a smaller duration of fade in and fade out in the character scenes as compared to all other scenes. So the character scenes should be separately stored.

- (5) Use **RemoveClashes.py** file for the folder containing all the scenes except the Character scenes to remove any overlaps between the scenes. There is no need to check if a character scenes clashes with any other scene as a character scene will never clash with any other scene as it is barely of 1 to 2 second duration.

Now, Let us denote the folder having only character scenes by Folder-1 and the folder having rest of the scenes without any clashes by Folder-2. Folder-2 is actually referring to the output path of RemoveClashes.py file.

- (6) As we have character scenes in a separate folder i.e. Folder-1 and rest of the scenes without clashes in Folder-2. Run **FadeInFadeOut.py** for both the folders with a fade duration of 0.2 seconds for the folder with character scenes (Folder-1) and with a fade duration of 0.5 seconds for the folder containing rest of the scenes (Folder-2).

- (7) Merge the contents of Folder-1 and Folder-2 using **MergeContentsOfTwoFolders.py** file in a new folder. Now, the new folder contains all the scenes that are to be put in the trailer with appropriate fade in and fade out effects in both audio and video.

- (8) Use **IncreaseVolumeOfScenesThatContainSpeech.py** file to increase the volume of the scenes having speech in them by a factor of 4 (ideal). This is to make the speech clearly audible in the final trailer.

- (9) Use **Concatenate.py** file to concatenate all the scenes to make the trailer.

- (10) Use **MoveFileFromOneFolderToAnother.py** to put the stitched trailer file (mp4) and the theme music file (mp3) in the same directory.

- (11) Use **AddBackgroundMusic.py** file to add the theme music in the background of the stitched trailer to make the final trailer.

We have generated the Final Trailer for the Input Movie.