

Mood Recognition in Soundtracks

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Problem Description

Given a instrumental sound track from a movie scene we want to be able to infer the mood the music is trying to set.

For instance, there are automatic subtitle generators (speech-to-text), but they miss the music cues. We would like to develop a tool that could recognize the mood set by the background music and label it for the user.

If time permits, we will try to recognize audio events (such as gunshots or crying) to further decipher the mood.

Challenges

The main challenge in such tasks is the subjectiveness and diversity. Given a instrumental music piece, different people might label them differently, and many pieces that are very different could be under the same label.

In addition, while there are dataset that could be used for the tasks, they are limited in size (<2k samples).

Lastly, in a real movie, additional processing would be needed to extract the instrumental sound (remove the overlapping speech).

Demo Goals

Our aim is to be able to recognize the mood of a few popular soundtracks during an in class demo. We could also ask the audience for specific soundtracks and try to download and analyse them.

Work Division

We plan to work together to write a python script that analyses a wave file and returns a label.

Femke	50% + Spelling checker
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