

Assignment 3 Report

Audio Content Analysis

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Classification of Piano and Trumpet audio clips

Overall Accuracy: 54.76%

Percentage of frames that are correctly classified per source class:

Piano: 100%

Trumpet: 6.45%

Classification of Trombone and Trumpet audio clips

Overall Accuracy: 66.75%

Percentage of frames that are correctly classified per source class:

Trombone: 99.93%

Trumpet: 36.10%

If we observe the audio clips for the trumpet, we can identify few silence regions. The errors can be accounted for this region because silence regions are very hard to classify. When classifying, we should also take note of the reverberation. A slight reverberation can make an instrument's features completely different to an algorithm. The human ear has been trained with lots of samples to easily identify reverberation and might not feel like a major change. We should also note that, the number of samples to train the classifier is low. A larger amount of data might give better results.