## **Abstract**

The project deals with the characterization and the classification of the emotions expressed by music. The analysis has been done from a sonologic perspective, considering that our aim is trying to discover if these emotions are differently perceived when we listen the different part of a song separately (voice, instrumentation, voice and instrumentation together) in respect of listening the whole song produced.

After reviewing the existent literature, we have focused our attention/have started the work introducing a global view on the most interesting features and issues of the categorization of the emotions expressed by music. With this aim, we have created a collection of soundtracks of different music styles able to transmit different emotional reactions/stimulus, by whom we have extracted 4 different versions: voice, instrumentation, voice + instrumentation and a mix of them; the emotions transmitted by any soundtracks have been analysed through a survey that we presented to a varied public.

We have statistically examined the answers and we have established connections between any soundtrack and the emotions perceived, considering the existence of a predominant emotion and the relationships between them in any soundtrack.

In this way, we have observed that positive emotions (happiness, animation) are more frequently perceived than negative (irritation, contempt); on the other hand, we have noticed that the different elements of a song have strongly impact on the emotions' perception.

Next, we have realised an acoustic analysis of any soundtrack and we have deduced the most relevant musical features of any one that allow to predict which emotions will be perceived by the listeners appreciating other soundtracks and under the different musical conditions mentioned before.

In this way, negative emotions have obtained best prediction values, mainly in mix condition; furthermore, emotions perception in mix condition has increased their values in combination with voice and instrumental features.

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