

Project proposal

Our ideas of MSLP project is a classifier of music style. We want to get a music audio dataset with the label style of each music (Rock, pop, rap...) and train a neural network to predict the style of unknown musics.

In detail, we want to create two different models:

- A multilayer perceptron.
- A gaussian model

Our input for the model will be the Fourier's transform of the audio, so we will load the audio dataset, compute his Fourier's transform with the FFT algorithm and give it as an input on our two models.

We will create the dataset ourselves, we will first get a sample of 30 music of each style and if the model's train are quick, we will add some other music. To prevent bias in the dataset, an artist will have a maximum of two music in the dataset.

The expected result will be a vector of probabilities, the i coefficient of the vector define the probability that the music belongs to i class. The different music styles we want to predict are Rock, Metal, RAP and classic.

Some over AI to find the style of a music already exist like music genre finder develop by Chosic, but we did not find an open source and performant AI for this purpose.