Exercise 3 - Multimedia Data Mining

Group09

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**Introduction**

In this assigment, we performed a task in the Music Information

Retrieval field, the audio music similarity and retrieval.

# Dataset Preparation

For the dataset, we have downloaded and used the following collection:

<http://kronos.ifs.tuwien.ac.at/ISMIRgenre_mp3_44khz_64kbit_mono_30sec.zip>

This collection consists of 6 classes (genres):

* Classical
* Electronic
* Jaz\_blues
* Metal\_punk
* Rock\_pop
* world

We used the Collection provided in the the slide Seeking for diversity in the collection, we used five very different genres:

Classical, Eletronic, Jazz Blues, Metal Punk and Rock Pop.

TODO: Describe the class characteristics

# Evaluation Preparation

We compare two different features sets, the Rhythm Histogram

(RH) and the Statistical Spectrum Descriptor (SSD).

# Feature Extraction

# Perform similarity retrieval

# Evaluate and Summarize Results

The result is made by comparing two different feature sets. There

were three features sets available: the Rhythm Histogram (RH), Rhythm

Patter (RP) and Statistical Spectrum Descriptor (SSD).

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We evaluate the top 1-5th, 20th, 40th, 50th and 100th songs

retrieved for the two first songs of each genre, as shown in Table 1. For each

query song, two graders attributed a categorical broad score**2**:

• 0 - Not similar

• 1 - Similar

• 2 - Very Similar

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| query | 1 | 2 | 3 | 4 | 5 | 20 | 40 | 50 | 100 |
| Classical 1  RH  SSH | 2(Example) 1(Example) |  |  |  |  |  |  |  |  |
| Classical 2 |  |  |  |  |  |  |  |  |  |
| Eletronic 1 |  |  |  |  |  |  |  |  |  |
| Eletronic 2 |  |  |  |  |  |  |  |  |  |
| Jazz Blues 1 |  |  |  |  |  |  |  |  |  |
| Jazz Blues 2 |  |  |  |  |  |  |  |  |  |
| Metal Punk 1 |  |  |  |  |  |  |  |  |  |
| Metal Punk 2 |  |  |  |  |  |  |  |  |  |
| Rock Pop 1 |  |  |  |  |  |  |  |  |  |
| Rock Pop 2 |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| query | 1 | 2 | 3 | 4 | 5 | 20 | 40 | 50 | 100 |
| Classical 1  RH  SSH | 2(Example) 2(Example) |  |  |  |  |  |  |  |  |
| Classical 2 |  |  |  |  |  |  |  |  |  |
| Eletronic 1 |  |  |  |  |  |  |  |  |  |
| Eletronic 2 |  |  |  |  |  |  |  |  |  |
| Jazz Blues 1 |  |  |  |  |  |  |  |  |  |
| Jazz Blues 2 |  |  |  |  |  |  |  |  |  |
| Metal Punk 1 |  |  |  |  |  |  |  |  |  |
| Metal Punk 2 |  |  |  |  |  |  |  |  |  |
| Rock Pop 1 |  |  |  |  |  |  |  |  |  |
| Rock Pop 2 |  |  |  |  |  |  |  |  |  |

Table 1: Results.