

Music Genre Classification

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Abstract

Here goes the abstract: : Paria

1 Introduction

You will properly define the genre classification problem, and indicate a few references to the literature. explaining the problem, the current and common methods to solve this problem. the way that we approach it, the algorithms that we use and the reason we use these algorithms. a very brief overview of the results. The organization of the paper. : Paria

2 Dimensionality Reduction

Describe your dimension reduction technique, and justify why it is appropriate to use it in this context. You should explain what performance is expected. I suggest we give some background to dimensionality reduction and also mention the Johnson-Lindestrauss theorem here. : Sahana

2.1 mfcc

Sahana

2.2 PCA

Sahana

2.3 k-means

Abhijit

2.4 Multidimensional Scaling

Abhijit

2.5 Modified Gaussian Mixture

Paria

3 Distance Metrics

Explain what are the available distance in the space of songs. Describe your distance and any pre-processing performed before computing the distance. : Abhijit

3.1 Minowski distance

Abhijit

3.2 Earth Movers distance

Abhijit

3.3 Euclidean distance

Paria

3.4 Kullback-Leibler distance (KL) distance

Paria

4 Statiscal learning

Explain how the training data help find the genre of an unknown song. This could be as simple as finding the closest song among all the songs for which you know the genre. Or it could involve more sophisticated methods. Paria

4.1 kNN

Paria

4.2 Modified-kNN

Paria

4.3 Neural Network

Sahana

5 Experiments

Describe the experiments, and include the confusion matrix. Discuss the influence of the various parameters, and describe how the optimal parameters were chosen. Include the computation time for your method. : [Sahana](#)

6 Discussion

Provide a critique of the approach and discuss any potential improvement. Discuss the ability of your approach to classify non-classical into the five remaining genres. [Abhijit](#)

References

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