

ML1

Music Genre Classification

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Abstract

1 Introduction

1.1 Related Work

2 Our Work

2.1 Description of data and data processing

2.2 Classification Methods

The following 8 different classifiers from the SciKitLearn Python Libraries were used.

1. *K-nearest-neighbors(KNN)*
2. *Logistic Regression with l_2 penalty(LR)* using one-vs-rest scheme for the multi-class classification
3. *Chained PCA and Logistic Regression (PCALR)*
4. *Support Vector Machine (SVM)* with an exponential kernel function
5. *Naive Bayes classifier(NB)* using the Gaussian Naive Bayes algorithm
6. *PCA + Logistic Regression*
7. *Random Forests Classifier*
8. *Decision Trees*
9. *AdaBoost*

2.3 Evaluation

3 Results

4 Discussion and Conclusion

- Discussion of results, behaviour of classification methods on songs
 - Summary and conclusion, including extensions

5 References

-Pedregosa F, Varoquaux G, Gramfort A, Michel V, Thirion B, et al. (2011)
Scikit-learn: Machine learning in Python. Journal of Machine Learning Research 12: 2825–2830