Mapping musical notes to socio-political events

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Abstract

Musical genres are labels created to characterize different types of music. In the past, categorising using musical genres was carried out manually by humans. Nowadays these may be replaced by automatic musical genre classification replacing the manual procedure. This is a topic which has seen an increased interest recently as one of the cornerstones of the general area of Music Information Retrieval. It is also certain that music has a significant commercial, cultural and political impact on real-world events bringing positive change and unity into the commercial, cultural and political world.

In this paper, a neural and fuzzy technique is investigated for two main aims: (1) automatic musical genre classification and (2) mapping music notes to socio-political events. The efficiency of the algorithm is studied by using historical data.

First, five types of music, including, blues, classical, country, disco and pop were used to automate music genre classification. A total of 125 songs were used in the experiment. The model is used to predict the genres provided the songs. Computational results demonstrated that the predictions are in good agreement with the experimental data. The model may now be used to classify the genres of any song provided.

Second, a correlation between the popular music prior to election and the outcome of the election is assumed. This could mean a dependency of the election results on the popular music. Therefore, a model was developed using a set of training data to map the election results to the popular music. This was done using neural and fuzzy network techniques. Data related to the popular music one year prior to the election and also data on the election results were collected for the study. A total of 26 songs from the hit list was used to check the model. The prediction of the election results in comparison with the historical data is well with the party winning the election matching the prediction. The model predictions show good agreement with the historical data.

It is noted that in the computational experiments above only a limited amount of data was available on the songs and more data would allow for more reliable prediction. Future work includes refining the model for the political event prediction to become more sophisticated by adapting other machine learning techniques with a large amount of data. This can then be used to produce reliable predictions for future election results.