Effective Parameter Selection for Audio-Based Music Mood Classification for Christian Kokborok Song: A Regression-Based Approach

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Abstract : Music mood classification is developing in both the areas of music information retrieval (MIR) and natural language processing (NLP). Some of the Indian languages like Hindi English etc. have considerable exposure in MIR. But research in mood classification in regional language is very less. In this paper, powerful audio based feature for Kokborok Christian song is identified and mood classification task has been performed. Kokborok is an Indo-Burman language especially spoken in the northeastern part of India and also some other countries like Bangladesh, Myanmar etc. For performing audio-based classification task, useful audio features are taken out by jMIR software. There are some standard audio parameters are there for the audio-based task but as known to all that every language has its unique characteristics. So here, the most significant features which are the best fit for the database of Kokborok song is analysed. The regression-based model is used to find out the independent parameters that act as a predictor and predicts the dependencies of parameters and shows how it will impact on overall classification result. For classification WEKA 3.5 is used, and selected parameters create a classification model. And another model is developed by using all the standard audio features that are used by most of the researcher. In this experiment, the essential parameters that are responsible for effective audio based mood classification and parameters that do not significantly change for each of the Christian Kokborok songs are analysed, and a comparison is also shown between the two above model.