ABSTRACT

Music has become commonplace for all circles and is always present in various occasions, such as state events, various types of celebrations, and religious rituals that are full of sacredness. Music can be categorized in various forms, one of which is classified into genres. Music genre classification plays an important role in the music industry, specifically improving the user experience of online music service applications. In this research, music genre classification uses random forest because it is relatively easy to customize to the classification needs, effective for large data involving high-dimensional features, and easy to interpret the important components in classification. The data s used are GTZAN and FMA small. The classification starts from the preprocessing stage, followed by audio feature extraction from both data, then the random forest model is created, and ends with evaluation of the classification model. This music genre classification uses two random forest models namely the random forest model without hyperparameter tuning and the random forest model with hyperparameter tuning. After the two models were formed and evaluated, it was found that both types of models from the both data are able to classify each genre well. However, the accuracy for the random forest model with hyperparameter tuning is higher than the random forest model without hyperparameter tuning, 87.95% of the GTZAN data and 47.6% of the FMA small data for the model with hyperparameter tuning; 81.68% of the GTZAN data and 44.3% of the FMA small data.

Keywords: random forest, GTZAN, FMA small, features extraction, hyperparameter tuning.