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A NORTH INDIAN RAGA RECOGNITION USING ENSEMBLE CLASSIFIER

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Abstract
Indian classical music is an ancient art form. Western and Indian music differ in the sequence of musical notes that are present in the melodic segment. Raga recognition in Indian classical music has been an exciting area of music information retrieval system. This can be useful to create a music library, search raga related music, and music education system. Recognition of raga using machine learning algorithms is a very complex task. This paper aims to find a suitable classifier for a dataset of instrumental music of 12 ragas. The music database has audio files of 4 different musical instruments. For this dataset, the ensemble bagged tree classifier outperforms the raga recognition. This approach suits our dataset to gain accuracy of 96.32%. This paper compares the results with the ensemble subspace KNN model which gives an accuracy of 95.83%. From the derived results, it is observed that ensemble classifiers are better for variants of MFCC features extracted for our North Indian Raga Dataset.

Author Keywords
North Indian Raga, Audio Feature Extraction, (MFCC) Mel Frequency Cepstral Coefficients, Ensembel Bagged Tree, Ensemble subspace KNN

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