Topic: Bird Call Recognition

Abstract:

We are going to implement a simple method/strategy for bird's song and call identification. It builds on known and efficient Technologies. The method presented here relies particularly on the fact that training and test input signals are mono label, i.e. only one species may be heard at one time.

Basically what we are doing is firstly we are training our machine using some provided audio file (.wav) i.e. by getting the spectrum of the audio file and converting it into move efficient features MFCCs (Mel-frequency cepstral coefficients), so that machine can be trained on these features. The machine learning model used is SVM (Support Vector machine) and then the model is tested by providing data or audios through test data set.

In MFCCs the frequency bands are equally spaced on the mel-scale, which approximates the human auditory systems response more closely than the linearly-spaced frequency bands used in normal spectrum and hence are considered as good features for process of speech recognition, here bird call recognition

Actually the work done in this field is quite less and also machine learning has to be implemented for the voice recognition. So this unique idea i.e. implementing machine learning using octave for voice recognition gave us an immense energy and motivation to work on this idea.

Also bird call recognition helps in finding number of bird species in an area and types of bird species without accessing each and every bird that is quite an irrelevant approach.

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