AUTOMATIC CHORD DETECTION USING HARMONIC SOUND EMPHASIZED CHROMA FROM MUSICAL ACOUSTIC SIGNAL

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ABSTRACT

In this abstract we describe a method to automatically detect chord progression from musical acoustic signal. We suppress drum sounds because most popular music contains drum and such non-harmonic sound prevend to detect chord. We use Harmonic/Percussive sound separation tecnique, developed in our laboratory to get harmonic emphasized signal, then we use chroma vector and hidden Markov models the same as previous method.

1 INTRODUCTION

This paper descrive a method using chroma vector[1] and HMM to detect chord sequence from music acoustic music similar to Sheh's one[2]. Besides we suppress percussive component by harmonic percussive sounds separetion[3, 4, 5], since pops or jazz usually contains drums and they must prevent to detect chord. This method uses the anisotropic of harmonic sounds and purcussive sounds on spectrograms. Spectrograms of harmonic sounds usually have stable pitches, therefore are concentrated in some frequency bins and have a smooth time envelope, while percussive sounds don t have pitches, therefore have smooth frequency envelopes and are concentrated in a short time. We show that using harmonic emphasized chroma results higer accurancy in average[6].

2 REFERENCES

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