

SIMPLE TRAINED AUDIO CHORD RECOGNITION

Daniel P. W. Ellis

LabROSA,
Columbia University, NY
dpwe@ee.columbia.edu

ABSTRACT

This is a preliminary description of our submission to the 2008 MIREX Audio Chord Recognition contest. Our system uses labeled training data to construct simple Gaussian models of the acoustic realizations of each chord based on beat-synchronous chroma features. Chord recognition is achieved with these models and a simple HMM structure using the transition probabilities estimated from the training data.

1. INTRODUCTION

This is a placeholder abstract. Our chord recognition system uses the same beat-synchronous representation used in our cover song detection system [1], but trains a single Gaussian model for the features associated with each chord symbol, using hand-labeled training data. We use our instantaneous-frequency-based 12-dimensional chroma features, one per beat. We extract chroma features twice, once using a spectrum centered on 400 Hz, and again using the spectrum around 100 Hz to emphasize the bass line.

2. REFERENCES

- [1] Ellis, D. & G. Poliner “Identifying cover songs with chroma features and dynamic-programming beat tracking”, Proc. ICASSP-07, Hawaii, 2007, IV-1429-1432.