# AUDIO LATIN MUSIC GENRE CLASSIFICATION: A MIREX 2013 SUBMISSION BASED ON A DEEP LEARNING APPROACH TO RHYTHM MODELLING

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#### ABSTRACT

This MIREX 2013 submission approaches the task of latin music genre classification from a rhythm modelling perspective. The submission is an implementation of the algorithm that was presented by the contributor of the submission in [1].

#### **1. BRIEF DESCRIPTION**

Given that the core algorithm underlying this contribution is presented in [1], in this abstract we only summarize the basic steps:

- Feature Extraction stage: multiple rhythmic signatures (patterns) are extracted per music recording based on the self-similarity analysis of the recording.
- The rhythmic patterns form a training set which is used to train a 5-layer architecture. This deep architecture consists of 5 Restricted Boltzmann Machines followed by an associative memory.
- After the deep architecture has been trained, it is employed as a classifier; the unknown recording is processed to yield a set of rhythmic signatures, each one of which is in turn classified by the network to a latin music genre. A majority rule assigns the recording to the genre which has been assigned the largest number of signatures.

The reader is referred to [1] for more details.

## 2. REFERENCES

 A. Pikrakis: "A deep learning approach to rhythm modeling with applications," *Proceedings of the 6th International Workshop on Machine Learning and Music (ML 2013)*, held in conjunction with the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD 2013), Prague, Czech Republic, September 23, 2013.

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