

# Using an Information Retrieval System for Video Classification

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**Abstract.** This paper describes a simple approach to resolve the video classification task. This approach consists in applying an Information Retrieval (IR) system as classifier. We have generated a document collection for each topic class predefined. This collection has been composed of documents retrieved using the Google<sup>1</sup> search engine. Following the IR strategy, we have used the speech transcriptions of the videos as textual queries. The results obtained show that an IR system can perform well as video classifier if the speech transcriptions of the videos to classify have good quality.

## 1 Introduction

In this paper we describe a simple approach to resolve the video classification task. Multimedia content-based retrieval is a challenging research field that has drawn significant attention in the multimedia research community. With the rapid growth of multimedia data, methods for effective indexing and search of visual content are decisive.

The video classification can be considered a subtask of the multimedia content-based retrieval. For instance, one of its applications is the automatic generation of RSS feeds specific to a particular information need. In addition, they could be personalized to a particular language preference. Therefore, the aim of the video classification task is to assign specific class labels to videos.

The aim of this work has been the study of the problem of the video classification task, and the development of a basic architecture which approaches it. We have some experience in the field of multimedia video retrieval [3] and in image retrieval [2][1][5].

This paper is organized as follows: Section 2 describes the whole system. Then, in the Section 3, experiments and results are described. Finally, in the Section 4, the conclusions are presented.

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<sup>1</sup> <http://www.google.com>

## 4 Conclusions and Future Work

In this paper we have presented a simple approach to resolve the video classification task. This approach consists in applying an Information Retrieval (IR) system as content-based classifier. The main processes of our approach are the generation of a document collection per topic class and the generation of a text-query per video to classify. Then, for each textual query generated, the IR system retrieves the document class more relevant.

Our results show that, despite the simplicity of our system, transcriptions are a good source of information for video classification. In other hand, the use of metadata from videos improves the results. In any case, some enhancements on the system can be performed, by selecting additional sources of learning data: for the future, we will work on a system that uses Wikipedia articles too.

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