

# **A Review on: Automatic Movie Character Annotation by Robust Face-Name Graph Matching**

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## **Abstract**

Now a day's character Identification from films is a very challenging task due to the huge variation in the appearance of each & every character. It will lead significant research interests and may have many interesting applications in today's life. In this paper, we investigate the problem of identifying characters & annotating them with respective name using graph matching algorithm to get the most accurate identification result. The contribution of our work include: 1)the character-character relationship representation including a noise insensitive 2) Use an edit operation based error correcting graph matching algorithm.3) Graph partitioning and graph matching for more complex character changes to handle simultaneously. 4) The existing character identification approaches , also we are going to perform an in-depth sensitivity analysis which will introduce two types of simulated noises.

## **Keywords:**

Character identification, Graph edits, graph matching, graph partition, Video Optical character recognition (VOCR), Error correcting graph matching (ECGM). Movie index and retrieval (MIR), Optical character recognition(OCR).

## **Introduction:**

The detonation of movie and TV videos content large amount of video data. Which will led to the need of more efficient techniques for analyzing and organization of video content. Automatic video character annotation is one of such key techniques. Our focus is on identifying & labeling characters with particular name in the movie and TV videos, where this technique is called movie character identification [1]. The objective for our project is to identify the faces of the characters from the video and label them with their names in the name cast. The cast lists, scripts, subtitles and closed captions are usually overworked are known as textual prompts. The characters are the focus for center of interests for the audience in movies & TV videos. These provide lots of clues about the movie structure and content. This technique of automatic character identification is very essential for semantic movie index and content retrieval, scene segmentation [7], summarization[2] and other applications such as movie index and retrieval (MIR) [3], [4].

## **Literature Review:**

The main problem in linking faces from face database with names from name script is to form relations between images or videos and texts for labeling the faces with their corresponding names. The very first proposal for

face-name association in news videos is Name-it on which is based on the co-occurrence between the detected faces and names extracted from the video transcript [5]. The system which built a database of named faces by video optical character recognition (VOCR) is called Named Faces system [6]. Yang et al. have developed a closed caption and speech transcript, based on that he built model. Thus which is improved their methods doing dynamic captioning which usages multiple instance of learning for partially labeled faces to reduce collected data by users. Speech transcript was also used for finding people those are frequently appearing in the news videos. In news videos, candidate names are made available from local matching while in TV and movie videos, the characters names are rarely directly produced in the subtitle or closed caption which contains names and no time stamps for aligning the video.

### **The Proposed Work-**

In movie video various appearances may be shown by one character, the noise introduced by face tracking is often affect representation of character, scene segmentation and face clustering. The extensive research efforts have been concentrated on character identification & automatic annotation and many applications have been proposed by this research, little work has focused on improving the robustness. Here our observation in investigation is that some statistic properties are preserved to inspire of these noises. The most important step in movie character identification is face track clustering. In this proposed work we choose any of one face clusters corresponding to one character name. Facename matching and face track clustering and are jointly optimized and conducted in a unique framework. Sensitivity analysis in the field of movie character identification, offers valid tools for characterizing the robustness to reduce noises for a model. In this work, we are going to fill up such gap by introducing two types of simulated noises.

### **Conclusion:**

The proposed schemes are useful to improve results for clustering and identification of the face tracks extracted from uncontrolled movie videos. With the usage of the sensitivity analysis, we have also shown that to some degree, such schemes have better robustness to the noises in constructing affinity graphs than the traditional methods. The conclusion is a principle for developing robust character identification method: intensity alike noises must be emphasized more than the coverage alike noises. In the future, we will extend our work to investigate the optimal functions for different movie genres. Another goal of future work is to exploit more character relationships, e.g., the sequential statistics for the speakers, to build affinity graphs and improve the robustness.

We can implement this technique for online face annotations.

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