Entity resolution in sports videos using image to video matching

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Declaration

We declare that this thesis is our own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

Name of Student Signature of student

Date:

Supervised by

Name of Supervisor Signature of Supervisor

Date:

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ABSTRACT

Using both text and image content features, a hybrid image retrieval system for Word Wide Web is developed in this paper. We first use a text-based image meta-search engine to retrieve images from the Web based on the text information on the image host pages to provide an initial image set. Because of the high-speed and low cost nature of the text-based approach, we can easily retrieve a broad coverage of images with a high recall rate and a relatively low precision. An image content based ordering is then performed on the initial image set. All the images are clustered into different folders based on the image content features. Experimental results confirm the efficiency of the system.

Current image search engines on the web rely purely on the keywords around the images and the filenames, which produces a lot of garbage in the search results. Alternatively, there exist methods for content based image retrieval that require a user to submit a query image, and return images that are similar in content. We propose a novel approach named Entity resolution in sports videos using image to video, that is a hybrid of the two methods. Our algorithm first retrieves the results of a keyword query from an existing image search engine, clusters the results based on extracted image features, and returns the cluster that is inferred to be the most relevant to the search query. Furthermore, it ranks the remaining results in order of relevance

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