

# **Entity resolution in sports videos using image to video matching**

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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 Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.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

## **Table of Contents**

Chapter 1 .....	1
Introduction.....	2
1.1 Background.....	2
1.2 Problem in Brief.....	3
1.3 Proposed Solution .....	4
1.4 Goals .....	5
1.5 Achievement in brief.....	5
Chapter 2.....	6
Review of others' work.....	6
2.1 Introduction.....	6
2.2 CCV (Color Coherence vector) .....	7
2.3 Sobel Edge Detection and CCV.....	7
2.4 New Wavelet Feature.....	7
2.5 Discrete wavelet Transform.....	8
2.6 RISE DCT Transform.....	9
2.7 Image Feature Inverted Indexing(FII) .....	9
2.8 FCTH and CEDD.....	9
2.9 Content Oriented Image Retrieval (COIR) .....	10
Chapter 3.....	11
Methodology .....	11
3.1Technology adopted.....	11

3.1.1 Web Development Technology .....	11
3.1.2 You Tube API for search Videos .....	11
3.1.3 Microsoft Computer Vision API.....	11
3.1.4 Cloudinary.....	11
3.1.5 Node.js .....	11
3.2 Approach.....	12
3.3 Development stages .....	13
Chapter 4.....	14
Design .....	14
4.1 Purpose of the Client in proposed system.....	14
4.2 Image server.....	15
4.2.1 Upload.....	15
4.2.2 Identify.....	16
4.2.3 Response .....	16
4.3 Cloudinary.....	16
4.4 Microsoft vision API.....	17
4.5 YouTube .....	17
4.5.1 YouTube API v3 .....	18
4.6 Functional overview.....	18
Chapter 5.....	19
Implementation .....	19
5.1 Introduction.....	19
5.2 System functionalities.....	19
5.2.1. Upload image .....	19
5.2.2. Play image server .....	20
5.2.3 Cloudinary.....	20
5.2.4 Identify image -Computer Vision API.....	21

Chapter 6.....	24
Discussion.....	24
6.1 Discussion.....	24
6.2 Product Evaluation.....	24
Conclusion.....	26
<b>References.....</b>	<b>27</b>

### **Table of Figure**

Figure 1:Basic architecture of the system.....	4
Figure 2:Process of the system.....	12
Figure 3: Design of the system.....	14
Figure 4: Design of the server.....	15
Figure 5: Upload screen.....	19