IARJSET
ISSN (Online) 2393-8021
ISSN (Print) 2394-1588
International Advanced Research Journal in Science, Engineering and Technology
NCRTET-17
National Conference on Recent Trends in Engineering & Technology
Government Polytechnic College Kasaragod, Kerala
Vol. 4, Special Issue 1

Video Content Analysis

Divya M B

Lecturer, Computer Engineering, Women's Polytechnic College, Thrissur, Kerala, India

Abstract: Video content analysis is a system which can be used for retrieving the contents inside a video and indexing the video according to that. The advances in the data capturing, storage, and communication technologies have made vast amounts of video data available to consumer and enterprise applications. However, interacting with multimedia data, and video in particular, requires more than connecting with data banks and delivering data via networks to customers' homes or offices. We still have limited tools and applications to describe, organize, and manage video data. The fundamental approach is to index video data and make it a structured media. Manually generating video content description is time consuming and thus more costly-to the point that it's almost impossible. Moreover, when available, it's subjective, inaccurate, and incomplete.We perceive a video program as a document. Video indexing should be analogous to text document indexing, where we perform a structural analysis to decompose a document into paragraphs, sentences, and words, before building indices. When someone authors a book, they create a table of contents for browsing the content's order and a semantic index of keywords and phrases for searching by content. Similarly, to Facilitate fast and accurate content access to video data, we should segment a video document into shots and scenes to compose a table of contents, and we should extract key-frames or key sequences as index entries for scenes or stories. Therefore, the core research in content-based video retrieval is developing technologies to automatically parse video, audio, and text to identify meaningful composition structure and to extract and represent content attributes of any video sources

Keywords: surveillance ,metadata,CBVR, skeletisation.

1. INTRODUCTION

With the increased availability of digital video recording technology more videos are being created than ever before, with these videos coming from diverse domains such as surveillance, amateur film- making, and home recording. These videos contribute to the growth of video media databases, such as those available online to consumers (e.g.,YouTube), or CCTV footage collections. From this exponential growth rises a new problem: how can these vast collections of media be accessed in the most effective way, so that users can find what they are looking for? Currently, video databases such as YouTube employ a text based search, where videos are returned based on a set of keywords provided by a user. Such a system, however, is flawed; text searches can search the textual metadata associated with a video (e.g., title, description, keyword tags), but not search the videos directly. The textual metadata is rarely an accurate representation of the video's content, for two reasons: firstly, the textual information is provided by the video's uploader, whose assessment of the video may be flawed or incomplete; secondly, the amount of information in a video cannot be represented in a few keywords without necessarily losing much potentially salient information. Here, we look at an alternative approach to this problem—content-based video retrieval (CBVR), which is an extension of content-based image retrieval (CBIR) to the video domain. Given an example video—a query—of what the user is searching for, CBVR directly searches the database's contents, meaning it can potentially return far more accurate results than existing text query systems, as it avoids the above problems associated with poor quality metadata. While CBVR has been well researched through a focus on key frames and 2-D features.

2. LITERATURE REVIEW

We have lot of technologies, the tags and indices are given by the person who is authorized to assign it. Currently, video databases such as YouTube employ a text based search, where videos are returned based on a set of keywords provided by a user. Such a system, however, is flawed; text searches can search the textual metadata associated with a video (e.g., title, description, keyword tags), but not search the videos directly. The textual metadata is rarely an accurate representation of the video's content, for two reasons: firstly, the textual information is provided by the video's uploader, whose assessment of the video may be flawed/incomplete; secondly, the amount of information in a video cannot be represented in a few keywords without necessarily losing much potentially salient information.

A. MODULAR DESCRIPTION

In our project it is mainly composed of three modules. They are,

A. Capturing Of Videos: Video capture is the process of converting an analogue video signal to digital video. In this module videos will be captured using high focus camera. Captured video will be taken and we have to take snapshots or frames at particular frame rate.

IARJSET
ISSN (Online) 2393-8021
ISSN (Print) 2394-1588
International Advanced Research Journal in Science, Engineering and Technology
NCRTET-17
National Conference on Recent Trends in Engineering & Technology
Government Polytechnic College Kasaragod, Kerala
Vol. 4, Special Issue 1

B. *Processing Of Images:*

Captured image will be undergoing various steps. First image will be segmented which means converting to edges in a grey scale and after this skeletisation which means measuring this edge.

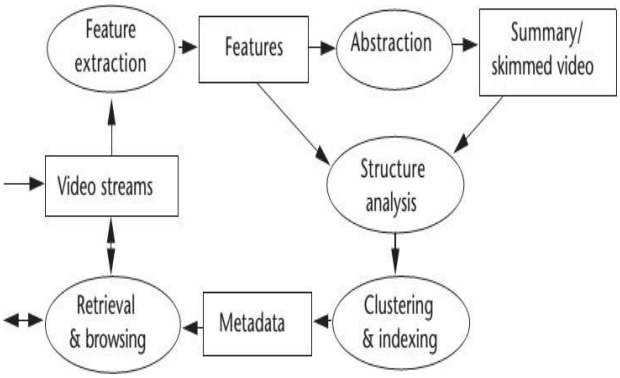
C. *Image Comparison And Prediction:*

Stored images in database will be compared with captured images and character of person will be predicted.

3. PROPOSED SYSTEM

A. Block diagram and fig Explanation

The proposed system is going to be developed in MATLAB. The intended audience is the whole people who used to watch videos in video sharing websites Given an example video—a query—of what the user is searching for, CBVR directly searches the database's contents, meaning it can potentially return far more accurate results than existing text query systems, as it avoids the above problems associated with poor quality metadata. This software operates on Windows XP or Windows 7or8 and with a system configuration of Pentium III or above mainly designed for the organization for the security purpose and database is not necessary required for storing the images. Database is already inbuilt in the MATLAB language.



4. CONCLUSION

This application is currently an open one, which promises any amount of modules to be integrated along with it. This means that in future this system can be incorporated in this application such that this can made even more enhanced considering the current trends and the developing the future in the coming year.It is also possible integrate the entire system by developing existing software package to an intranet level application. This enables to control the geographical distributed organization units into one, which gives a far wide and consolidate view of the organization. New security methods should be developed to avoid the misuse of the system in a wide environment. The biometrics standard can be implemented for the purpose of high level of security.The advances in the data capturing, storage, and communication technologies have made vast amounts of video data available to consumer and enterprise applications. However, interacting with multimedia data, and video in particular, requires more than connecting with data banks and delivering data via networks to customers' homes or offices. We still have limited tools and applications to describe, organize, and manage video data. The fundamental approach is to index video data and make it a structured media. Manually generating video content description is time consuming—and thus more costly—to the point that it's almost impossible. We perceive a video program as a document. Video indexing should be analogous to text document indexing, where we perform a structural analysis to decompose a document into paragraphs, sentences, and words, before building indices. When someone authors a book, they create a table of contents for browsing the content's order and a semantic index of keywords and phrases for searching by content. Similarly, to facilitate fast and accurate content access to video data, we should segment a video document into shots and scenes to compose a table of contents, and we should extract key-frames or key sequences as index entries for scenes or stories. Therefore, the core research in content-based video retrieval is developing technologies to automatically parse video, audio, and text to identify meaningful composition structure and to extract and represent content attributes of any video sources. Extensive experiments comparing the results of features with actual human interest could be used as another method of analysis. Since user interactions are indispensable in the determination of features, it is desirable to develop new theories, methods, and tools to facilitate the user's Involvement. Therefore, the core research in content-based video retrieval is developing technologies to automatically parse video, audio, and text to identify meaningful composition structure and to extract and represent content attributes of any video sources

IARJSET
ISSN (Online) 2393-8021
ISSN (Print) 2394-1588
International Advanced Research Journal in Science, Engineering and Technology
NCRTET-17
National Conference on Recent Trends in Engineering & Technology
Government Polytechnic College Kasaragod, Kerala
Vol. 4, Special Issue 1

ACKNOWLEDGMENT

Mrs.Divya M.B thanks to head of the institution ,colleagues and her family members for their support.

REFERENCES

[1] Sabbar, W.; Chergui, A.; Bekkhoucha, A., "Video summarization using shot segmentation and local motion estimation," Innovative Computing Technology (INTECH), 2012 Second International Conference on, vol., no., pp.190, 193, 18-20 Sept. 2012
[2] MATLAB Guide ,Desmond J. Higham and Nicholas J. Higham, SIAM, 2000, ISBN 0-89871-516-4.
[3] T. Liu, H. J. Zhang, and F. Qi, "A novel video key frame extraction algorithm based on perceived motion energy model," IEEE transactions on circuits and systems for video technology, vol. 13, no. 10, Oct 2003, pp 1006-1013.
[4] G. Ciocca and R. Schettini, "An innovative algorithm for key frame extraction in video summarization," Journal of Real-Time Image Processing (Springer), vol. 1, no. 1, pp. 69–88, 2006.
[5] I.C. Chang and K. Y. Cheng, "Content- selection based video summarization," IEEE International Conference On Consumer Electronics, Las Vegas Convention Center, USA, Jan 2007, pp. 11–14.

BIOGRAPHY

Mrs.Divya M B,Now Lecturer in Govt Women's Polytechnic college,Nedupuzha. She completed BTech in Computer Science & Engineering from Calicut University in 2006.From 2007-2015; she worked as a Lecturer in Sahrdaya college of Engineering.She completed her ME in computer science & engineering from PSG college of engineering. She handled the subject areas such as compilers, theory of computation, data structures and analysis, graph theory and combinatorics.Her area of interest is data structures and computational issues.