IMPROVED IMAGE SEARCHING USING USER INPUT IMAGE FUNDAMENTAL FEATURE TECHNIQUE

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ABSTRACT

Image processing plays a key role in every human’s life today. The use of images has widely increased due to many factors, but technology makes it very easy to upload images from any corner of the world. Information is exchanged via images easily and effectively and is an important mode of communication today. Searching for images on the web has its own advantages as well as disadvantages. The latest technique involves searching the content by using traditional text retrieval, and it never gives any guarantee to find the required information. For searching image content today most of the researchers spend time for creating various indexes to bring the effective result. This research paper brings one image searching technique which uses image feature based searching with the help of image fundamental feature. The experimental results also confirmed that the proposed approach can always retrieve intended targets even with poor selection of initial query points.

Key words: Image processing, Image Retrieval, Image content, Pixels, Data Mining, Knowledge Extraction, Image Query, Image preprocessing.

INTRODUCTION

Content-based image retrieval (CBIR) and the query by image content (QBIC) application of computer vision to the image retrieval problem, namely, the problem of searching large database of digital images, ”Content-based” colors, shapes, textures (Salton et al., 1998) or any other information that can be derived from the image itself without referring to. (Saravanan and Srinivasan 2013). That means that the search will examine the actual contents of the image. The term ‘content’ in this context to analyze image content and searches can be expensive to produce or work on such titles or Meta keywords, the ability to rely on (Oikonomopoulou et al., 2006). Each image is a color map that identifies a ratio of pixels in color similarity by computing retrieve images based on the image will reveal colors that humans possess certain values. Current research by region and by category of multicolored parts of the spatial relationship of the color ratio is sought. Their study, based on the colors of images it does not depend on one of the most widely used techniques, the image size or orientation. Color and color histograms comparing searches generally, though not the only technique in practice is required (Saravanan and Srinivasan 2012).

EXISTING SYSTEM

The existing Image extraction using users query deal with a single query in a single retrieval session only. There are no virtual features for session modification and maintenance
They are using short term cross session
In Short session, each image can contain only one virtual feature
The system cannot output the retrieval results to a given query based on a sufficiently large set of training data
The system has no knowledge about which database images are relevant and which are no relevant to a set of known labels, since we do not know the user’s intention until the user starts the response iteration.

Disadvantage of Existing System:

1. Unrelated search results occurs
2. Responses are not used
3. No further improvement in Image retrieval

PROPOSED SYSTEM

• The proposed image fundamental feature based system differs from the existing technique by the way
• The user initializes a query session by submitting an image.
• The system then compares the query image to each image in the database and returns the images that are the nearest neighbors to the query.
• If the user is not satisfied with the retrieved result, the user can activate an Retrieval Response process by identifying which retrieved images are relevant and which are not relevant.
• Based on the retrieved result users can give notification to the system which is relevant and which is not relevant this will store in virtual feature
• Virtual feature can adapt that reference with that image category for future effective retrievals

Advantages of Proposed System:

1. User Response is included
2. Reduces the unrelated searches
3. The images are searched using the image properties
4. Single Image can have multiple concepts

EXPERIMENTAL SETUP

Image Preprocessing: Content based image retrieval system has database for store images and virtual concepts (Barbu, et al., 2012). Before initializing image operation, we must upload images into database based on application. In this application admin have a responsibility to upload images into database. As admin process, he can view list of image which is available in database If he wants to upload image with corresponding index values he can upload new image into database (Saravanan and Srinivasan, 2011). This process output shown in the fig 4. The image preprocessing steps are shown below
Fig 1. Extracted video segment images are taken as input, every input frame image values are extracted and stored in the database for user extraction operation. Any new image wants to add here image feature values are extracted and corresponding image as stored in the database.

**Image search process:** When we try to extract the target image by using image searching technique. This process consisting of various sub task they are

**Query Image:** In the search session, first we will upload into system, in this time histogram calculation and image vector calculation made automatically (Saravanan and Srinivasan, 2010). Uploaded images are stored in the Data base for further process. Images are stored in the data based by using image histogram value, it reduces the user searching time and occupy the less memory space. Due to this process, the efficiency improved (Saravanan and Srinivasan, 2013). Every user input trained images this process are automated and resultant histogram values are stored in the database for further extraction process. This process output are shown in fig 5-11.

**Pseudo code for image comparison**

```csharp
string constr = "server=.; database=content; uid=sa";
SqlConnection con = new SqlConnection (constr);
string str1 = "insert into vfcon (vfpicture) values ('" +
server=.; database=content; uid=sa"");

SqlCommand cmd = new SqlCommand(cmd1, con);
 SqlDataReader sdr = cmd.ExecuteReader();
string words1 = sdr [+ null];
char delimStr1 = ',';
```

**Creation of Index for stored images:** When we query image into system it will process with database images when query image or database image doesn’t have virtual processing but it has indexing. Based on Indexing and image processing, it will display result. Improve the query processing images are indexed, it reduces the users burden and improve the searching time.

**Creation of fundamental feature for indexed Images:**

This process will retrieve images using image processing and virtual feature. In this module, we will retrieve images and calculate their image vector and get their image vector in temporary storage and we will short listed closest images from that place and we will arrange and retrieved images using virtual feature. This process further shown in the following diagram. Here process started with image stored feature value (Jiang YG SUPER, 2012) Based on users input image query, system finds match and return as output for user input. Here user can future select most relevant image as user input response operation. Users response image stored further in the database. Next any user input image given information are searched in this database to produce most effective result.

**Virtual feature Updation:** When a user gives response based on retrieved results if those images have relevant feedback to retrieve relevant pictures in that results (T. Quack, 2006). It will store for fundamental feature. The process performed in two step process they are

**Fundamental feature creatio:** When the user give relevant feedback to retrieved images, if those images haven’t relationship or empty as virtual feature, it will create new virtual feature concept(Junsong Yuan et al., 2011).

**Pseudo code for crating IFF**

```csharp
for (int i = 0; i < calc. Length; i++)
if (vfr[i]! = null) { string [] split = null;
string words1 = vfr[i];
char delimStr1 = '"';
split = words1.Split(delimStr1);
if (b < split.Length)
{ b = split.Length;)
for (int a = 0; a < split. Length; a++)
if (split[a]! = "") { val [i, a] = Convert.ToInt32 (split[a]);
```
Fig 3: Image Retrieval Process flow Diagram

EXPERIMENTAL OUTPUT

Fig 4. Image Uploading Process

Fig 5. Image Histogram Creation

Fig 6. Image uploaded

Fig 7. Storing various images in Data based

Fig 8. Image Feature Creation

Fig 9. Image Upload Process

Fig 10. Image features extracted
CONCLUSION AND FEATURE ENHANCEMENT: Image retrieval based on the user input query is not an easy task. Number of researcher contributed different technique for effective retrieval process. This paper brings one of such technique for image retrieval using image feature. Experiments prove that the proposed technique brings effective result compare to the existing techniques. Every application has its own merits and demerits. The proposed technique has covered almost all the requirements. Further requirements and improvements can easily be done since the coding is mainly structured or modular in nature. Changing the existing modules or adding new modules can append improvements. Further enhancements can be made to the application, so that the search results functions very attractive and useful manner than the present one. The process future extended with other image feature values, and one or more feature values may be added to get her. It improves the searching time and also give more output for given input.

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