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Great spate algorithm for intelligent content based image retrieval

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ABSTRACT

Content based image retrieval (CBIR) systems work by retrieving images which are related to the query image (QI) from huge databases. The available CBIR systems extract limited feature sets which confine the retrieval efficacy. In this work, extensive robust and important features were extracted from the images database and then stored in the feature repository. This feature set is composed of color signature with the shape and color texture features. Where, features are extracted from the given QI in the similar fashion. In this paper, we introduce a new approach to image retrieval. We proposed a novel great spate algorithm used to find content based images in large datasets like the images that has the highest similarity with the QI from a database. During the CBIR process every image in the database is indicated by chromosome, from the QI the color signature, shape and color texture are extracted and also from the chromosomes that were generated. The next step is calculating fitness function for every chromosome using similarity difference equation. The great spate algorithm when inserted in the genetic algorithm was an effective way to yield a good solution instead of using the genetic algorithm alone. Our proposed CBIR system is assessed by inquiring number of images from the test dataset and the efficiency of the system is evaluated by calculating precision-recall value for the results. The results were superior to other state-of-the-art CBIR systems in regard to precision.

INTRODUCTION

In recent years, rapid advances in electronic storage capacity and computing power have triggered the growth of large digital image collections following the increase of users on the internet. Over the years, we have seen exponential increases in number of digital images and video both over the net and even in our own devices as we attempt to keep more memories through photos and videos. This increased usage may be due to several factors such as education, entertainment, commercial purposes, and etc. and it is now apparent that more and more images are routinely used to convey large amounts of information. Due to the increasing difficulty in making proper use of the information contained in digital images and videos, advanced information systems are now more important than ever as they are needed to manage image collections more efficiently.

LITERATURE SURVEY

The huge invent and innovation in networking technologies and major growth in internet have evolved various kinds of data emerging into web, leading to shift in trend of viewing of data in various aspects. The challenge of secured storage of this multimedia data is been resolved with advent of various big data technologies such as Hadoop and also secured processing of these multimedia data using content-based image retrieval techniques is been highlighted. The information related to low level properties of

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image by physical and mathematical properties using a complex model. This system allows storing image into the database by its features and gives the result on the basis of feature extracted of Query image and then results most similar matches. Images retrieval is increasing and crucial importance is given to domain specific information. Large and distributed collections of scientific, technical images are retrieved using sophisticated and precise measures of similarity and query-based semantics. [1]

The retrieval is done by using features. Content Based Image Retrieval (CBIR) is a method to organize the wide variety of images by their visual features. In modern days with the development of social networking mediums, so many digital images are uploaded day by day. In order to access this huge data collection new techniques are very essential. These techniques will ease the data handling and the user can easily access the data. Content Based Image Retrieval is such a technique which uses features for searching a particular image from a database. Navigation-Pattern-based Relevance Feedback (NPRF) Approach is used. [2]

A new segmentation method is proposed by Bromwich and Roy to segment Bangla words. They traced the lower contour of each connected component in hand-written word-image anticlockwise. During this process, relevant features are extracted and their vectors are nor-mailed. [3]

SYSTEM ANALYSIS

Existing System

In this existing system a context based image similarity scheme for prosthetic knowledge by evaluating image similarity using the associated groups of concepts. The evaluation can be used in combination with different measures such as WorldNet, Wikipedia, and other basic distance metrics to build the group distance.

Among semantic measures, web-based proximity measures, that exploit statistical data provided by search engines, are particularly effective for similarity evaluation between concepts.

Disadvantages

- Its robustness in complex background may not be satisfactory due to the limitation of spatial domain features.
- It requires more time to process due to the large number of features.
- Accuracy is very low compared to proposed method
- More complexity for large size of images

PROPOSED SYSTEM

The content based image retrieval system uses a query model to convert the image into an internal representation of query, based on features extracted from input images. A retrieval model performs image retrieval by computing similarities between images in object and the query image. The great deluge algorithm when inserted in the genetic algorithm was an effective way to yield a good solution instead of using the genetic algorithm alone. The next step is calculating fitness function for every chromosome using similarity difference equation. Conversational neural network algorithm to find content based images in large datasets like the images that has the highest similarity with the query image from a database.

Advantages

- Hare wavelets are real, orthogonal and symmetric.
- Its coefficients are either 1 or -1.
- It is the only wavelet that allows perfect localization in the transform domain.

MODULE

- Query image
- Feature Extraction
- Database image
- Similarity matching
- Retrieved image

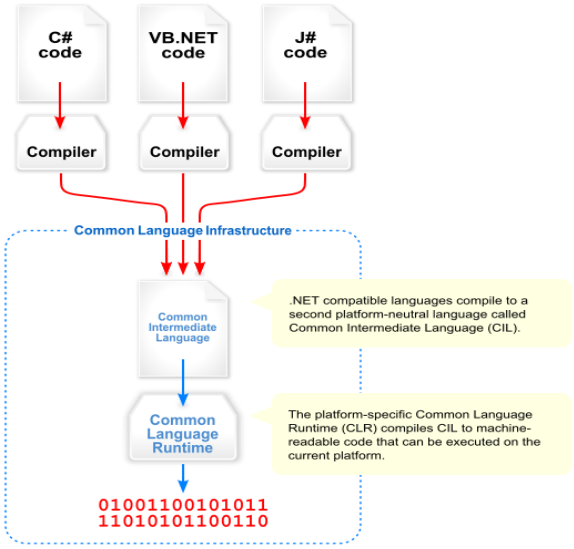

Figure 1 visual overview of the common language infrastructure (CLI)

CONCLUSION

This paper, we present a relatively simple and effective algorithm for text detection and extraction. This new text extraction algorithm automatically detects and extracts text from complex background images by applying conversational neural networks to the images. This algorithm is robust with respect to different languages, font size, style, orientation, color and alignment of text and can be used in large variety of application fields such as vehicle license plate detection to detect number plate of vehicle, mobile robot navigation to detect text-based land marks, object identification etc. Most of the previous methods fail when the characters are not aligned well or when the characters are too small. They also result in some missing characters when the characters have very poor contrast with respect to the background.

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