

Golden Research Thoughts



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Abstract:-

In this paper we proposed the system for CBIR. How captures the images from various web servers. CBIR it is a program to retrieve images, captures only those images whose satisfies some criterion. User enter the content then web crawler crawl the images from various web servers. Retrieve the images using Decision Tree, K Nearest Neighbors (KNN), Association rule, Cluster analysis; pattern matching etc these

ANALYSIS OF THE PERFORMANCE OF CBIR USING DATA MINING TECHNIQUES



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methods can be used. Crawling technique are used to retrieve the images from various web server. Crawling is a process to discover new and updated pages to be added in web servers. Comparative analysis of techniques done in WEKA S/W

Keywords:

Content based image retrieval, Mining or retrieval techniques and crawler.



INTRODUCTION

Image retrieval means to captures and accept images from web. In retrieval or mining process we use some kinds of techniques just, Classification, Association Rule, Cluster, Pattern analysis etc.

Association Rule: - Association Rule is an important class of regularities in web data. Association rule discovery and statistical correlation analysis can find groups of items. In Association rule use SUPPORT & CONFIDENCE to calculate which image should retrieve.

Cluster- Clustering is the process of organizing data instances into groups whose members are similar in some way. A cluster is therefore a collection of data instances which are “similar” to each other and are “dissimilar” to data instances in other clusters.

Crawler: - It is simple automated program or script that automatically scans or crawl images as per the user query terms. Capture images in Hundreds of Millions of images.

Decision Tree: Decision tree learning is one of the most widely used techniques for classification. Its classification accuracy is competitive with other learning methods, and it is very efficient.

KNN:- K-Nearest Neighbors algorithms used for to find pattern recognition.

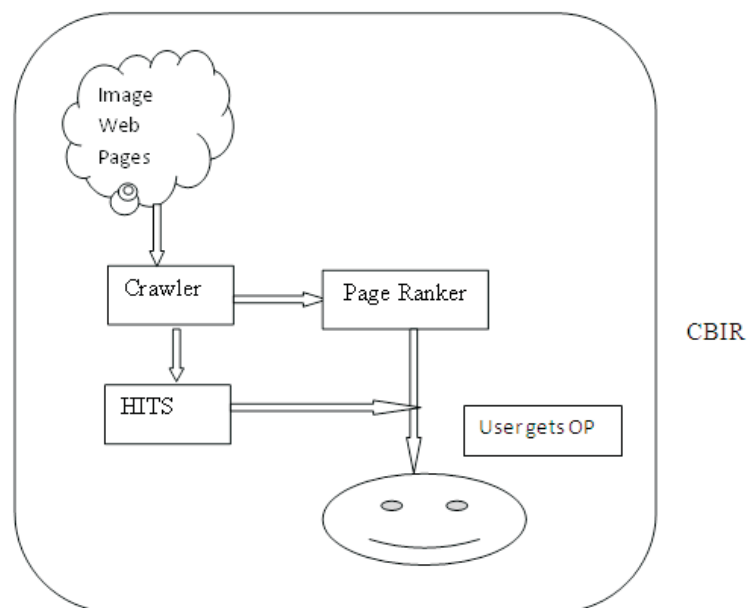


Fig. 1 CBIR Process from internet image

COMPARISON OF TECHNIQUES:-

By extensive study and analysis some of the important techniques for image retrieving from web. It is concluded that each technique has some relative strengths and limitation. A detailed comparison of image retrieving techniques studied is shown in table 1.

Sr.No.	Classification	Property	Average	Comments
1	Decision Tree	Finds a set of thresholds for a pattern- dependent sequence of features	88	Overtraining sensitive, need pruning
2	KNN	optimization of two or more layers	88	Sensitive to training parameters, slow training
3	Cluster	Captures same group of objects	66	Mostly for Dataset
4	SVM	Support vector	92	Scale dependent , iterative , slow training ,

Table 1. Classification of Datamining techniques

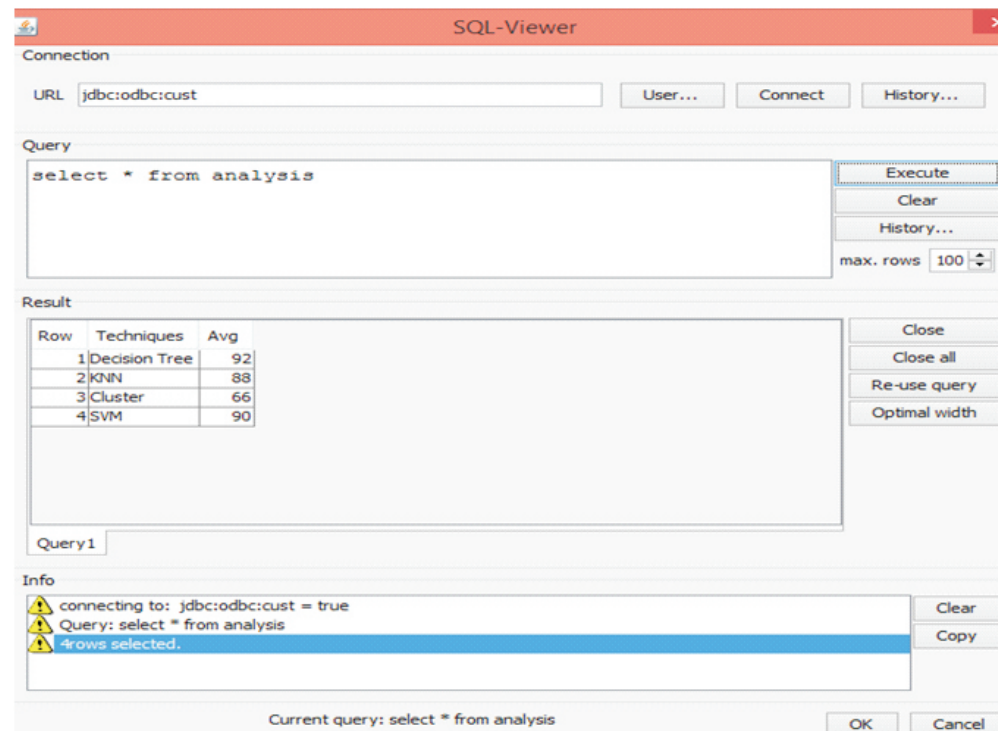
As per review some research paper, literature study to compare some Datamining techniques for Image retrieval. In table 1 to show strengths and limitation Some researcher and developer defining some techniques for CBIR.

Experiment:-

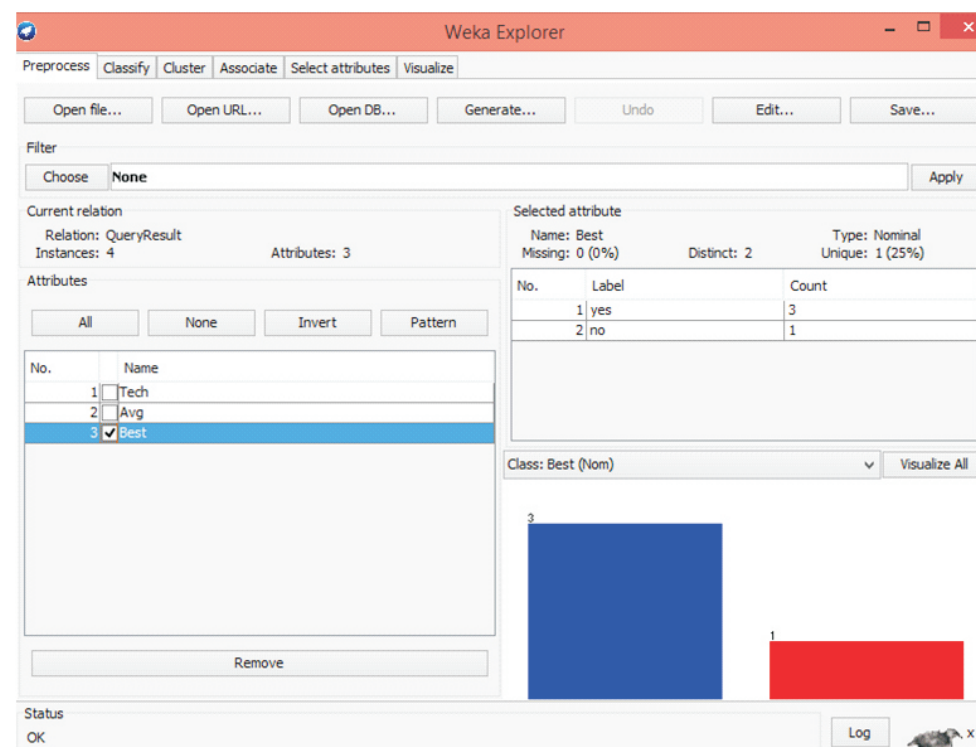
To collect the data of various techniques use to retrieve the images from web servers. Some mining techniques are Decision tree, pattern, classification, association rule and KNN (k-Nearest Neighbors). Which are the best techniques use to retrieve the image as accurate, fast to client.

E.g. Suppose we create one database file In Ms_Access File

The WEKA package will be used for the analysis of collected data. Based on analysis, interpretation will be made to reach the meaningful conclusions. To perform operation in collected data in WEKA



Classification “Yes” and “No” Class type



RESULT:-

Tree view

=== Run information ===

Scheme:weka.classifiers.rules.DecisionTable -X 1 -S "weka.attributeSelection.BestFirst -D 1 -N 5"

Relation: QueryResult

Instances:4
 Attributes:3
 Tech
 Avg
 Best
 Test mode:evaluate on training data
 === Classifier model (full training set) ===
 Decision Table:
 Number of training instances: 4
 Number of Rules : 1
 Non matches covered by Majority class.
 Best first.
 Start set: no attributes
 Search direction: forward
 Stale search after 5 node expansions
 Total number of subsets evaluated: 3
 Merit of best subset found: 75
 Evaluation (for feature selection): CV (leave one out)
 Feature set: 3
 Time taken to build model: 0seconds
 === Evaluation on training set ===
 === Summary ===

Correctly Classified Instances	3	75	%
Incorrectly Classified Instances	1	25	%
Kappa statistic	0		
Mean absolute error	0.45		
Root mean squared error	0.4583		
Relative absolute error	108	%	
Root relative squared error	103.923	%	
Total Number of Instances	4		

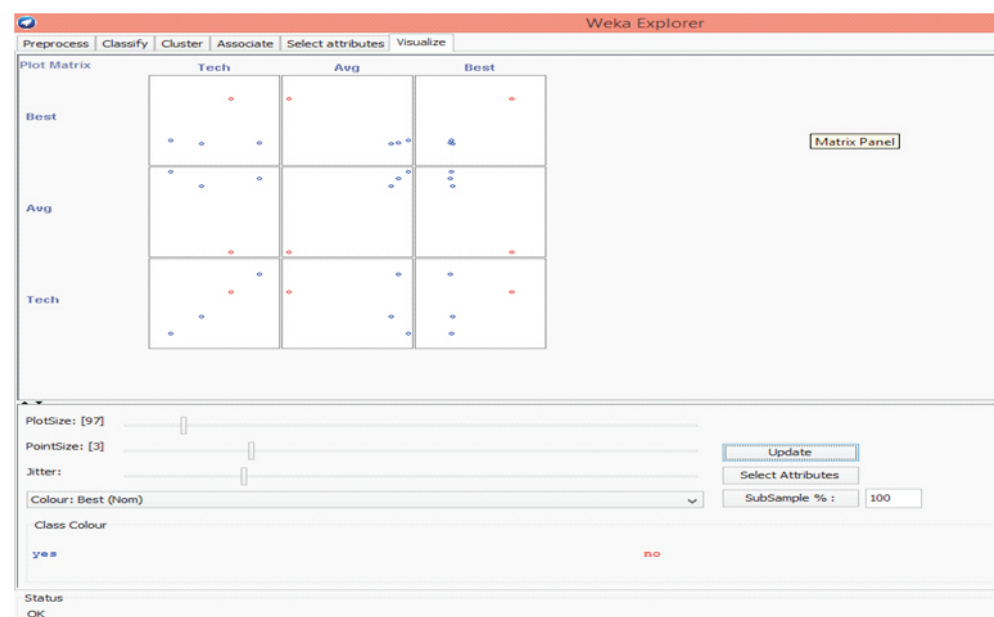
=== Detailed Accuracy By Class ===

	TPRate	FPRate	Precision	Recall	F-Measure	ROC Area	Class
1	1	0.75	1	0.857	0.5	yes	
0	0	0	0	0	0.5	no	
Weighted Avg.	0.75	0.75	0.563	0.75	0.643	0.5	

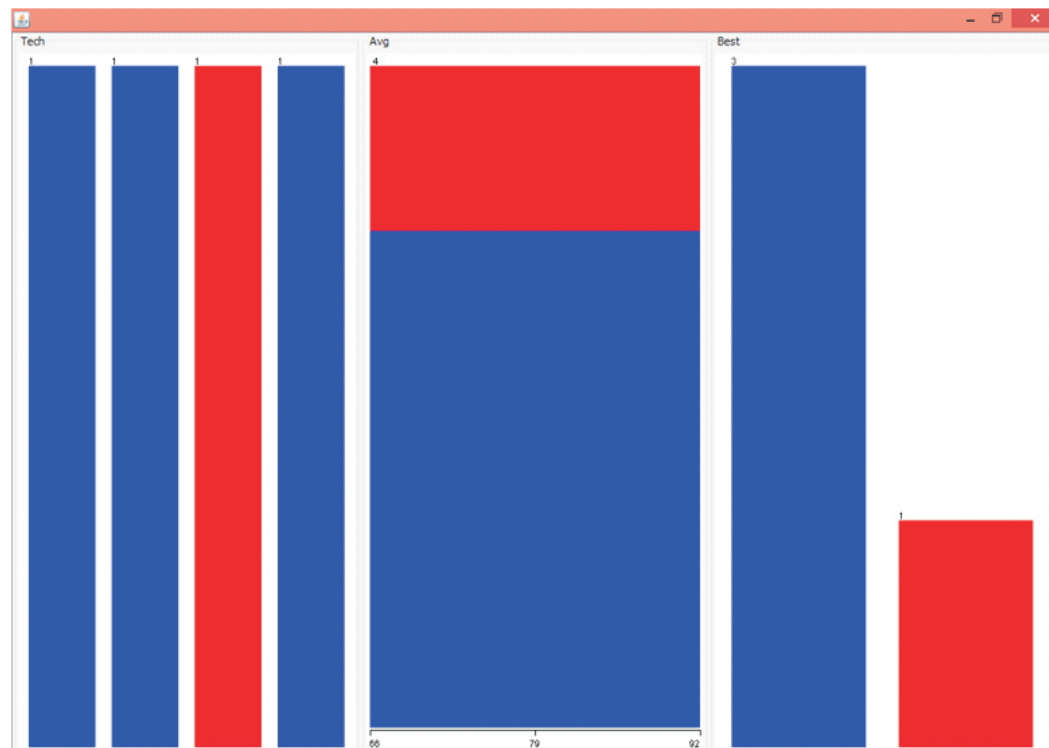
=== Confusion Matrix ===

```
a b <-- classified as
3 0 | a = yes
1 0 | b = no
```

Visualize Output:-



Visualize All-



CONCLUSION:-

This paper has attempted to for the purpose of Comparative analysis of CBIR which is best (Datamining techniques) uses to retrieve the images. The proposed methods were successfully tested. The results which were obtained after the analysis were satisfactory and contained valuable information about the image retrieval. It is concluded that existing techniques have some limitations and strengths. So this paper gives summarization of the different data mining techniques with their functionality for content based image retrieval systems.

REFERNCES:-

1. Web data mining- Bing Liu
2. Lashari S. A. and Ibrahim R. Comparative Analysis of data mining techniques.
3. Sayed thousif hussain-Extracting images from web mining.
4. Kotsiantis, S. B. Supervised machine learning: A review of classification techniques, Informatica. 2007, Volume (31), pp. 249-268.
5. Rajshree S. Dubey- Image Mining using CBIR
6. Dr. H.B.Kekre-Augmentation of Block Truncation Coding based image retrieval
7. Ritendra Datta- CBIR approaches and trends
8. A. K. Jain and R. C. Dubes, -Algorithms for Clustering Data