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OBJECTIVES

HYPOTHESES

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

RECOMMENDATIONS/SUGGESTIONS

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- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

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- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

QUERY BASED IMAGE RETRIEVAL USING NEAREST NEIGHBORS

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ABSTRACT

Image retrieval has been the vast research area for past several years in the field content based image retrieval ,since there are a lot Techniques are used here query based retrieval is the good and useful thing.In this paper QBIR is discussed with nearest neighbor for retrieving of images from the databases. To achieve this here a tool is used named as "TIRUMN" .Using this the query image is matched with the image which should be available in the databases. For Matching purposes nearest neighbor algorithm is used. The proposed system will provides very keen results.

KEYWORDS
Image retrieval, Matching, image databases, Query image, Tool.

1.1 INTRODUCTION

An image retrieval method is a computer based system for surfing, browsing, searching and matching retrieving the desired images from a huge database of digital images [1].These image databases consist of a huge set of images. This stored images may be used for kind of applications still the respective image should be in the databases. Retrieving one of the good methods which is used in content based images retrieval based on some queries[2] These funny things are details discussed in this article sequentially.

1.2 DATABASES

In the qbir databases done a vital roles. Today there are unlimited collections of databases are used for any kind of image processing applications .In this paper the database used is natural images(like sceneries, flowers ,buildings, naturals) named as tirumn databases(collection of images).This databases consist of thousands of images for selecting a query images. The images which is in the databases should be in the same format(like jpeg,png,bmb etc).

Some images in the image database.

2. IMAGE RETRIEVAL SYSTEM

2.1. IMAGE FETCHING

Fetching the images is an art in the computer vision technology since there a huge and huge set of methods and algorithms are here the image read in the general methods .Main focus is reteriving of images. In the huge set of database(folder) user can select any image refereed as query image for to match the image with other images inside the image databases. when in the selection process the notified process is one image should be fetch for future process .The entire process is defined as "quering"(IMAGE FECTCHING).

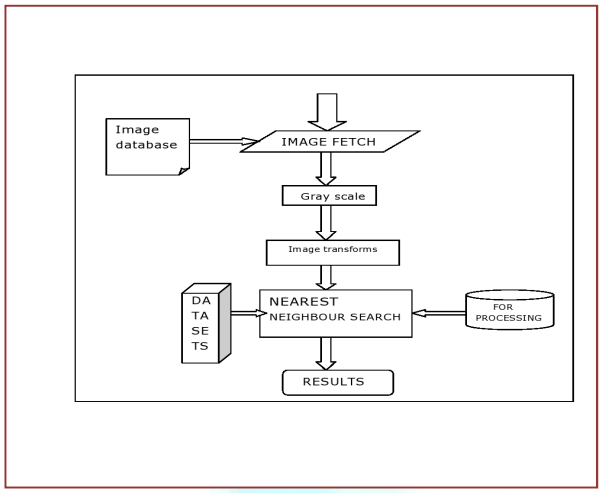
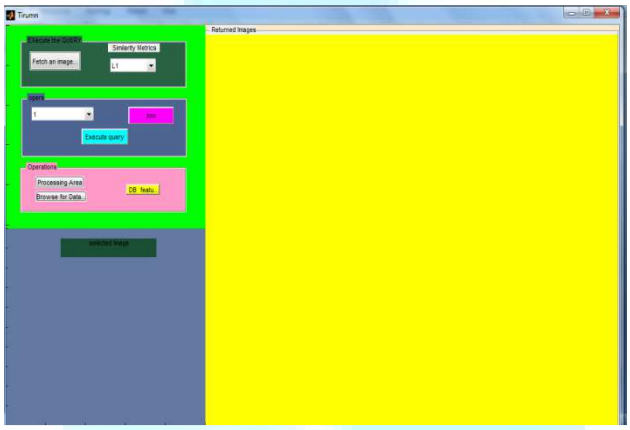


Image retrieval USING nearest neighbor.

2.2 TIRUMN GUI TOOL

This is the tool which is used to reteriving the images for selecting and fetching and matching the images with the other images which is available in the image databases. The entire process done with this tool called as "TIRUMN TOOL".



2.3 GRAY SCALE

Gray scale is the major factor in digital images processing but also in the computer visions. The intensity values of images are referred as gray scale. This is the first process in this Truman utility tool for finding the nearest neighbors. Grayscale is calculated using basic methods functions.

3 NOISE REMOVAL AND FILTER METHODS

3.1 HISTOGRAM

Distribution of graphical data. There are nearly more than ten methods are there to find the histogram. With getting the correct distribution then only the next step is possible. In general "distribution of pixel values" is referred as HISTROGRAM.

3.2 THE MEHTOD OF COLORAUTO CORRELOGRAM

The color auto correlogram transmit the idea of existence of larger or smaller areas of a certain color within the image. It gives the image statistics. This can be done using histograms[3].

3.3 COLOR MOMENTS ORIGIN PRIMITIVES

The color moments gives the neat idea about mean value and the variance and the skewness. Moments of image pixels is clearly defined using the color moments methodologies. color moments have been proved to be efficient in representing color distribution of images [4].

4. IMAGE TRANSFORMS

Image transforms is the most important aspect in the content based image retrieval systems that uses some simple arithmetic calculations on images or complex mathematical Notations in terms of operations which convert images from one representation to another information extraction is referred as image transforms for the desired format for your future representations. The filters are there to make it keen and also convolutions are also done. There are nearly a list of countable methods are there for image transforms.In this article the basic methods are only used for all the discussion here before[5].

5. SEARING AND MATCHING METHODS

In the content based image retrieval searching and matching algorithms are the very important process and also final process. In this paper the images are searched using the nearest neighbor algorithms. The steps is to starts with finding the new point.

5.1 CLASSIFICATION OF A NEW POINT

Find the nearest neighbor in the all the data called test data and then label the new point according to which set contains the majority of its k neighbors(k nearest neighbor).

5.2 MATCHING

From the point of the query image that is checked with all test data with k number of nearest neighbors.(code attached).

First all the points of training data are observed Find the exact image .There a lot of images going to be used. The simplest and well used method is nearest neighbor search. In the nearest neighbor search the training data is there and that is compared with the test data and the distances are calculated methods can also be implemented using with respect to the lot of methods.

5.2 SAMPLE OUPUTS

Processing orientation 1

Processing orientation 2
Processing orientation 3
Processing orientation 4
Processing orientation 5
Processing orientation 6
Code for <Variation in Phase Symetry> Starts
Taking Median for scale 1/4
Taking Median for scale 2/4
Taking Median for scale 3/4
Taking Median for scale 4/4
Code End for <Variation in Phase Symetry>

6. EXPERIMENT RESULTS

The experiment was conducted on a set of 1000 images. The dataset was obtained from internet. The database consists of 100 images of every class. The images are taken from different viewpoints but under approximately constant illumination conditions. The image resolution is resized to 256 x 256 pixels irrespective of its prior resolution.

APPENDIX

```
%TO call the entire function:
function [precision, recall, cmat] = knn(Returned images, dataset, ImageFeature, numeric values)
%# load dataset and extract image names
img = dataset(:, end);
dataset(:, end) = [];
% extract image name from queryImageFeatureVector
quy_iname=queryImageFeatureVector(:, end);
queryImageFeatureVector(:, end) = [];
Find the image labels:
k= length(dataset);
lls = zeros(k, 1);
for n = 0:length(lbls)-1
   if (imgk+1) >= -1 && img(k+1) <= 100)
      lls(k+1) = 1;
   elseif (img(k+1) > 100 && img(k+1) < 200)
      lls(k+1) = 2;
   elseif (img(k+1) >= 200 && img(k+1) < 300)
      lls(k+1) = 3;
   elseif (img(k+1) >= 300 && img(k+1) < 400)
      lls(k+1) = 4;
   elseif (img(k+1) >= 400 && img(k+1) < 500)
      lls(k+1) = 5;
   elseif (img(k+1) >= 500 && img(k+1) < 600)
      lls(k+1) = 6;
   elseif (img(k+1) >= 599 && img(k+1) < 700)
      lls(k+1) = 7;
   elseif (img(k+1) >= 699 && img(k+1) < 800)
      lls(k+1) = 8;
   elseif (img(k+1) >= 799 && img(k+1) <900)
      lls(k+1) = 9;
   elseif (img(k+1) >= 899 && img(k+1) <1000)
      l
ls(k+1) = 10;
   end
end
Taking gray values
[g gn] = grp2idx(lls);
[trIdx tstIdx] = crossvalind('HoldOut', lbls, 1/2);
pairwise = nchoosek(1:size(gn, 1), 2);
knn = cell(size(pairwise, 1), 1); predTest = zeros(sum(testIdx), numel(knnModel));
%# classify using one-against-one approach, knn
for k=1:numel(knnModel)
   %# get only training instances belonging to this pair
ix = trainIdx & any( bsxfun(@eq, g, pairwise(k,:)) , 2 );
knnModel{k} = knn(dataset(ix,:), g(ix), ...
'BoxConstraint',Inf,'Kernel_Function', 'rbf', 'rbf_sigma', 14.51);
prdTst(:,k) = knnclassify(knn{k}, dataset(tstIdx,:)); % matlab native KNN function
end
pred = mode(prdTest, 2);
cmat = confusionmat(g(testIdx), pred);
final_acc=100*sum(diag(cmat))./sum(cmat(:));
precision = zeros(size(gn, 1), 1);
recall = zeros(size(gn, 1), 1);
 precision = cmat(1, 1)/sum(cmat(:, 1));
for c = 2:size(gn, 1)
   precision(c) = cmat(c, c)/sum(cmat(c:end, c));
   recall(c) = cmat(c, c)/sum(cmat(c, c:end));
end
```

```
 for k = 1:numel(knnModel)
predQueryImg(:,k)=
knnclssify(knnModel{k},queryImageFeatureVector);
end
predFinalQueryImg=mode(predQueryImg, 2);
fprintf('Predicted Query Image Belongs to Class = %d\n', predFinalQueryImg);
dataset = [dataset img_names lbls];
imgsInClassX = dataset( find( dataset(:, end) == predFinalQueryImg ), : );
 imgsInClassXWithoutLbls= imgsInClassX;
imgsInClassXWithoutLbls(:, end)=[];
L2(numOfReturnedImgs, [queryImageFeatureVector query_img_name], imgsInClassXWithoutLbls, metric);
End.
```

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