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IRIS RECOGNITION USING IMAGE PROCESSING

Dipak Borde[1] , Sagar Dunage[2] , Abhishek Sharma[3] , Aniruddha Tambe[4] , Vinod Dhande[5]

[1234]*B.E EXTC, THEEM COE*

[5]*ASSOCIATE PROFESSOR, THEEM COE*

Abstrac: Iris recognition has been a fast growing, challenging and interesting area in real-time applications. A large number of iris recognition algorithms have been developed for decades. The paper presents novel Walshlet Pyramid based iris recognition technique. Here iris recognition is done using the image feature set extracted from Walsh Wavelets at various levels of decomposition. Analysis was performed of the proposed method, consisting of the False Acceptance Rate and the Genuine Acceptance Rate. The proposed technique is tested on an iris image database having 384 images. The results show that Walshlet at level-5 outperforms other Walshlets, because the higher level Walshlets are giving very fine texture features while the lower level Walshlets are representing very coarse texture features which are less useful for discrimination of images in iris recognition.

Keywords: Iris recognition, Algorithm, Segmentation , Evaluation.

I. INTRODUCTION

Animal detection is a very important and emerging area due to a large number of real life applications. Various methods for animal detection are used for indicating the presence of animals on the earth. Applications which are very important in real life are preventing the misuses of schemes provided by the government for the below poverty level people. All these applications can be narrowed down to two areas namely detection and identification of animals.This project will advance the ideas that recognise entails hypoproject testing. Hence, recognition is considered a generative process, where prior knowl-edge guides information sampling during recognition attempts. Ones the hypoproject is confirmed, it produces recognition. After that, the hypotheses of this generative process do not need to be conscious, whereas the output of confirmed hypotheses often seems to be explicit recognition. Specifically, you can be unaware of the process which preceded recognition, even though that process was governed by systematic information sampling in accordance with a memory trace. The second area that is identification of animals is very important in identifying the targeted animal and its behavior. Identification of animals helps human being to monitor and manage animals easier. Researchers in [5] designed and developed RFID-based mobile monitoring system for better management of animals in dynamic information retrieving, location tracking and to help users over a wireless network.

1. IRIS DETECTION

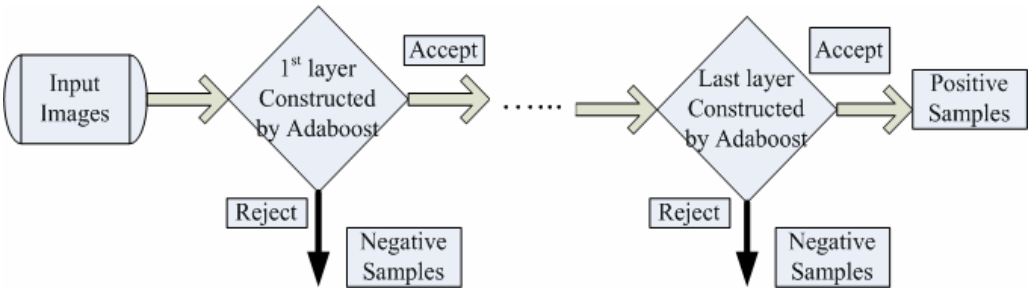

fig.1

2. DATABASE CREATION

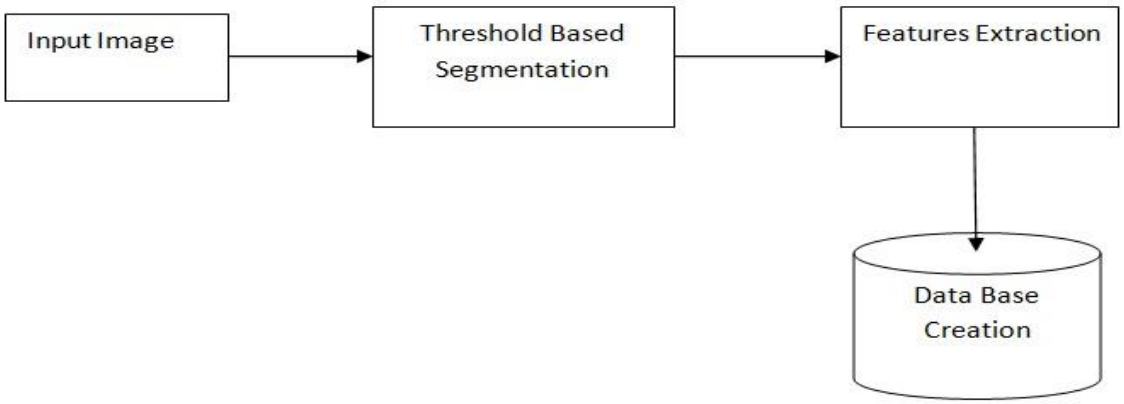

fig.2

3. DETECTION EVALUATION MODEL

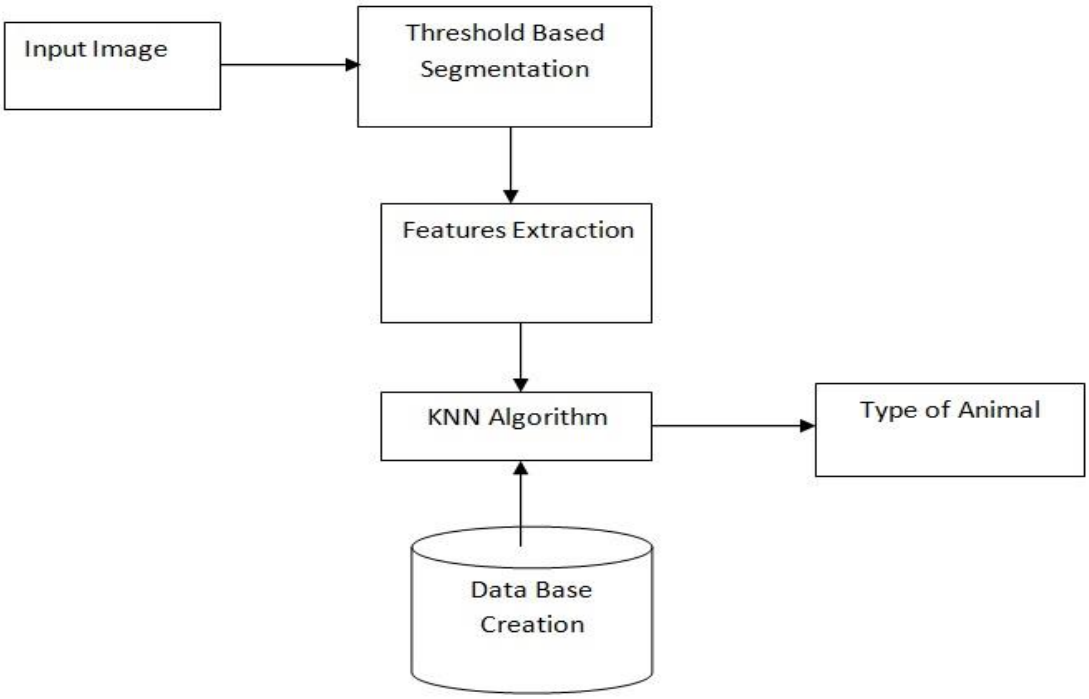

fig.3

Most of the iris detection frameworks use the eye to estimate the type of the input animal image to have a better accuracy. Our proposed method is shown in the fig.2 Proposed Methodology is divided into two parts. They are as follows:

I. Database Creation
II. Type Evaluation

A. Database Creation Using Segmentation

In this section, Threshold Based Segmentation is to create the database for the animal detection. The numbers of input images are collected for the creation of database. Fig.2 shows the overall implementation for the database creation for the animal detection and synthesis. Input images are used to create the database, threshold based segmentation is applied to the input age. Irish segmentation is explained in the previous chapter. After applying the segmentation different features of the iris

image are calculated. Feature calculated from the input image to detect the animal type are Area of the eye, major axis, miner axis, parameter of the eye and eccentricity of the image. Ones the features are detected from the input image we store them with the name of the animal whose eye image is taken as the input. This procedure is repeats for thousands of input images to create the database and to get the optimized results.

B. Evaluation Module

Animal type detection evaluation is process in where look of the person is predicted according to the input age. In previous section of thesis, the Threshold based segmentation to detect the features of the input image to create the database. Fig.3 shows the working of evaluation model. In the evaluation model Input image is given to the system. Threshold based segmentation is used to extract the feature the images this images is pass to the KNN algorithms and database created in the previous step. KNN algorithm takes the input from both database and system and finds the similar features from the database and generates animal type as the output of the system.

4. RESULT

4.1 Classification of IRIS

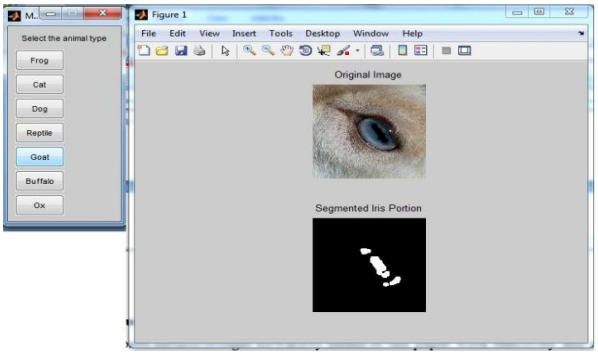

Figure shows the original image of animal and the detected iris of animal. Left hand figure shows the classification of that animal that is Goat.

4.2 Classification of animal

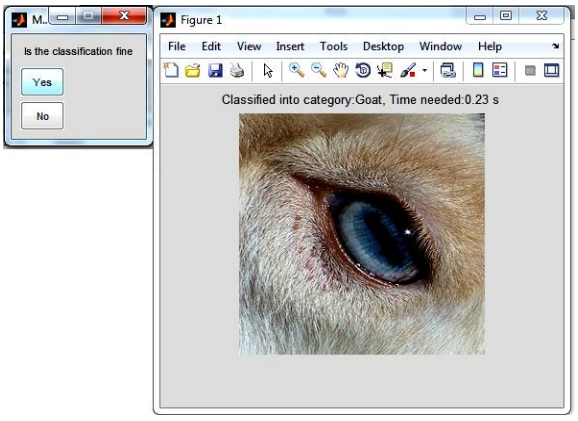

Figure shows the classified animal. And the left hand figure shows if the classification is right, click on 'Yes', Otherwise click on 'No'.

4.3 Wrong detection of animal

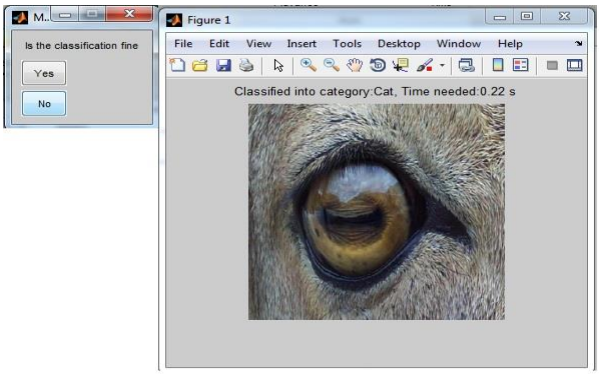

Figure shows, wrong detection of animal. It happens because the software doesn't classify this animal in our database. Left hand Figure shows, Click on 'No', because the classified animal is not our animal.

4.4 Animal not found in database

Figure shows, after click on 'No', It gives the massage "Animal not found in database".

5. CONCLUSION

According to experimental result and algorithm which is implemented in this project gives fruitful result in identification of animals. The overall project work consisted of two phases, training and evaluation wherein training phase consists of training of the system by user itself feeding the database with features of the iris image and the animal name. Hence, the result obtained by this project work is a far better than the previous works according to the literature survey and the project method gives an excellent job in detecting animal type with high accuracy rate.

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