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Correct Name Labelled For Search Based Face Annotation

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ABSTRACT: In this project, we investigate and implement a promising search based face annotation scheme by mining large amount of weakly labelled facial images freely available on the World Wide Web (WWW). We proposes a review on various techniques used for detection and analysis of each technique and efficient-based approximation algorithm for large-scale label refinement problem. The face annotation has many real world applications. Most of the users use person's name as the search query. So it is effective to label the images with their exact names. The automatic face recognition techniques can annotate the faces with exact labels and it also help to improve the search more efficiently annotations from them. The challenging part of search based face annotation task is management of most familiar facial images and their weak labels. Different techniques are used in retrieving facial images based on search query. The efficiency and performance of annotating systems are improved tremendously by using edge detection technique. This approach is beneficial to find the correct data related to facial features. Firstly, at least one accurate keyword is required to enable text-based search for a set of semantically similar images. Then content-based search is performed on this set to retrieve visually similar images. At last, annotations are mined from the descriptions. Specifically, the task of face-name association should obey the following three constraints: a face can only be assigned to a name appearing in its associated caption or to null; a name can be assigned to at most one face; and a face can be assigned to at most one name. Many conventional methods have been proposed to tackle this task while suffering from some common. The face annotation technique with edge detection algorithm is efficient to tackle problem in clustering based approximation algorithm and ULR algorithms can significantly boost the performance of the promising search based face annotation (SBFA) scheme.

KEYWORDS: Face Annotation, Face Recognition, Content Based, Text Analysis

I. INTRODUCTION

The face annotation is an important technique that to annotate facial feature images automatically. The face annotation can be useful to many Applications. The face annotation approaches are often treated as an extended face recognition issue, where different classification models are trained model based face annotation time consuming for collect a large amount of human labelled facial images.

Few studies have attempted to get a search based annotation for facial image annotation by mining to tackle the automated face annotation by exploiting content-based image retrieval method. The objective of is to assign correct data labels given query facial image. It is usually time consuming and cost to collect a large amount of human data labelled training facial images. It is usually difficult to the models when new data or new persons are added, in which an retraining process is usually required. The annotation or recognition performance often poorly when the number of persons or classes is very large.

The tracking problem is distinguished from the recognition problem in that its search processes are effective and easy to retrieve the data from the database. The time consuming problem overcome in this approach. This requires the inserted image to have the correct label for same facial images which are stored in database. The concept of edge detection algorithm by BMP file format is very much considered while tracking the face.

II. LITERATURE REVIEW

Mining Weakly Labeled Facial Images for Search Based Face Annotation

Dayong Wang, Steven. Hoi, Member, IEEE, Ying, and Jianke Zhu. IEEE TRANSACTIONS ON KNOWLEDGE DATA ENGINEERING, JANUARY 2014

This paper investigates a framework of search based face annotation with mining weakly labeled facial images that are available on the World Wide Web. One challenging problem for search based face annotation scheme is how to effectively perform annotation by exploiting the list of most similar facial images and their weak labels that are often noisy. To tackle the problem, we propose an effective unsupervised label filter approach for corrected the labels of facial images using machine learning techniques. The learning problem as a convex optimization and develop effective optimization algorithms to solve the large scale learning task efficiently. A clustering based approximation algorithm which can improve the scalability considerably. We have conducted an extensive set of studies on a large scale web facial image test bed, in which encouraging results showed that the ULR algorithms can significantly boost the performance of the promising SBFA scheme.

Review on Content Based Image Retrieval Search Based Face Annotation on Weakly Labeled Images

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Krishna Prasanth ,Anoop

The face annotation has many applications. The challenging part of search based face annotation task is management of familiar facial images and their weak labels. To tackle the problem, different techniques are adopted. The efficiency and performance of annotating systems are improved t by using these methods. Here this paper proposes a review on different techniques used for this purpose and check the of each technique.

Eigenface Domain Super Resolution for Face Recognition
Bahadir.Gunturk, *Student Member, IEEE*, Aziz. Batur, *Student Member, IEEE*, Altunbasak, *Senior Member, IEEE*, Monson Hayes, , *Fellow, IEEE*, Russell Mersereau, *Fellow, IEEE*.

Face images that are captured by cameras usually have a low resolution, which significantly limits the performance of face recognition systems. In the past, super resolution techniques have been proposed to increase the resolution by combining information from multiple images. These techniques use resolution as a preprocessing step to obtain a high resolution image that is passed to a face recognition system. Considering that most face recognition systems use an initial dimensionality reduction method, we propose to transfer the super resolution reconstruction from pixel domain to a lower dimensional face space. Such an approach has the advantage of a significant decrease in the computational complexity of the super resolution reconstruction. The reconstruction algorithm to obtain a visually improved high quality image, but instead constructs the information required by the recognition system directly in the dimensional domain without any unnecessary overhead. In addition That face super resolution is more robust to errors and noise than pixel domain resolution because of the addition of model based constraints.

III. MODULUS

- Database creation with image in binary bit format array
- Scanning BMP Format Reading per pixel value in RGB value
- Facial feature indexing with data label
- Similar face retrieval with value
- Detected Final output
- Refined data

IV. METHODOLOGY

1. The system fed with a image.
2. Extracting facial Features
3. The important data is extracted from the sample. Using software where many algorithms are available. The outcome which is a reduced set of data that represents the important features of the enrolled user's face.
4. Comparison new Templates
5. This depends on the application at hand. That identification purposes, It will be a comparison between the stored on a database.
6. Declaring a Match with data
7. The face recognition system will return a match The intervention of a human operator will be required in order to select the best fit from the candidate data.

V. PROPOSED WORK

Edge Detection Technique:

We investigate and implement a promising search based face annotation scheme by mining large amount of weakly labeled facial images freely available on the WWW. We propose a novel scheme for enhancing label. We propose an efficient-based approximation algorithm for large-scale label refinement problem. We conducted an extensive set of experiments, in which encouraging results were obtained. The selection of neural network is done as it has got the unique feature of flexibility with accuracy by using derivative edge detection algorithm.

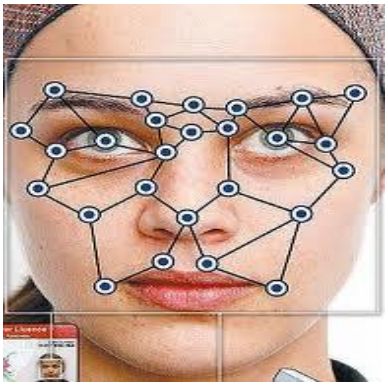

Figure 3.1:- Facial Edge Detection

Selection of the fiducially marks on the profile

If we look at the side profile of the human face, we find that certain points can be readily defined on the face profile. If these points can be correctly identified they can help in extracting certain characteristics features for that particular face. Ten such points are shown in figure. Out of these ten points, eight points are independent of each other but point 3 and 2 are interrelated with each other. All these points are calculated by using some mathematical relationship logic along with some statistical knowledge. These points are as follows:-

1) Point1: -Nose Point
2) Point2: -Chin Point
3) Point3: - Forehead Point
4) Point4: -Bridge Point
5) Point5: -Nose Bottom Point
6) Point6: -Throat Point
7) Point7: -Upper Lip Point
8) Point8: -Mouth Or Center Lip Point
9) Point9: -Lower Lip Point
10) Point10: -Brow Point

One important factor that should be considered in this case is that generally do not change with age. So can be considered as permanent data to train the neural network. Before extracting the facial features of the profile few points have to be kept in mind. Points 7,8,9 are soft tissues so their extraction depends on their facial expression while taking the photograph (Smiling, Laughing). It is very important that the expression should remain normal while taking the photograph; the head should remain leveled to the ground.

Search Base Face Annotation

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The proposed framework consists of the following steps:

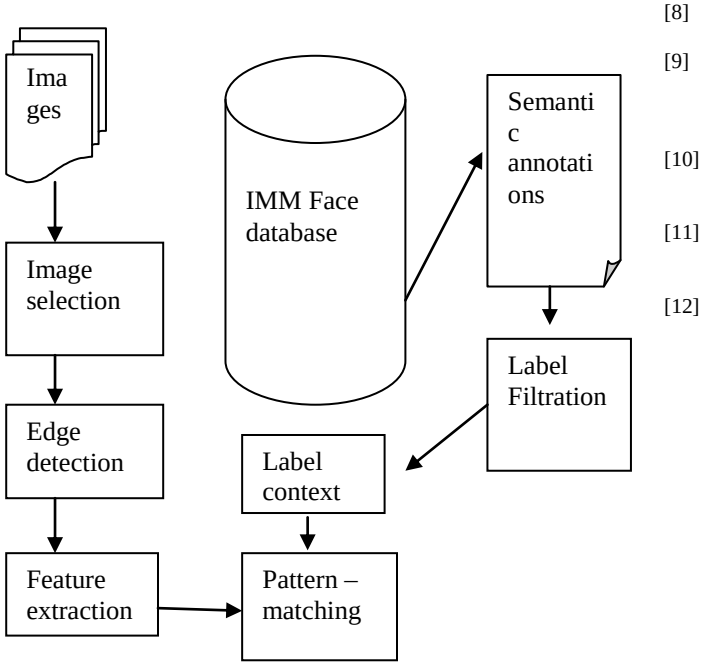
1. Facial Image Data Collection
2. Face Detection and indexing
3. User querying the image.
4. Similar facial image retrieval.
5. Face annotation
6. Analyzing the performance of face annotation scheme.

- The First two steps are conducted before the face annotation. The First step we will collect the facial images from World Wide Web (WWW) and collect the data related to those images. Facial images with data storing in database.
- The second step is to face detection and indexing the facial features by using Edge Detection Algorithm. Indexing should be proper between images and derivative images. Save images with indexing and find derivative of detected images with labeling correct information
- The third step is user querying the image.
- The fourth step is to find similar set of images are retrieved with labeling. User may upload the image for retrieving the images and derivative image. In this step user can find the proper indexing for images and same indexing for its derivative images.
- Fifth step to find face annotation.
- Finally the analyzing the performance of face annotation scheme.

VI. SOFTWARE

C#.NET is also compliant with Common Language that supports structured exception handling. The set of rules and constructs that are supported by the Common Language Runtime. It is the runtime environment provided by the .NET Framework; it manages the execution of the code and also makes the development process easier by providing services process.

VII. FLOW DIAGRAM



VIII. CONCLUSION

Auto faces annotation on weakly labeled images. Many research works and new methods are being proposed in this field. The research in this field demands importance as it is very useful in online searching and Social Medias. The future work will focus on multi person naming task and thereby increasing efficiency and accuracy of result. If the techniques are implemented properly, then the weak label problem will be smoothened.

IX. FUTURE WORK

It can be used in social networks for auto tagging. Online photo album management and news video summarization. Face annotation at macro scale and micro scale. Reduce weak labels and thus have application in efficient online search.

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