Implementation of face annotation by using efficient retrieval Based method

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Abstract-This paper proposes a robust face annotation technique by mining weakly labeled facial images. One challenging problem for 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 and incomplete. To tackle this problem, we propose an effective face annotation method for refining the labels of web facial images using machine learning techniques. On a training set of images with annotations, we compute feature vectors of image features which allow us to predict the probability of generating a word given the image regions. This may be used to automatically annotate and retrieve images given a word as a query.

I. Introduction

The popularity of social Medias brought a boom in the size of data especially images uploaded to internet Most of the images uploaded to internet are facial images. Efficient face annotation scheme can recognize the faces and annotate them properly. The images uploaded to internet are actually a treasure to future generations. But there is a problem that the efficient methods to retrieve all the images properly are not available. The main reason behind this is that most of the images are not properly tagged. The large number of human facial images shared over the different social real world application some of this images are tagged properly but many of images are not tagged properly so the facial annotation are came. Facial annotation also applied in video domain to identify the person who appeared in video. The model base annotation has more limitations. i.e. it is more time consuming and more costly to collect large amount of human labeled training facial image. Nowadays large amount of photos shared by users are human facial images and it is freely available in World Wide Web (WWW). Some of these facial images are tagged properly. Due to the significant increase of the amount of photos strong need has been emerged for automatic indexing. The most important and common entries for indexingpersonal photos are „who‟, „where‟, and „when‟ in that order.

II. Related work

Different techniques are used in retrieving facial images based on search query. Most of the users use person's name as the search query. Different studies are perform on face annotation in mining weakly labeled facial images which are present over internet in this human name are treated as input query and aim is to refine the text-based search results by achieving consist facial images.

Retrieval Based Face Annotation
D. Wang, S.C.H. Hoi, Y. He. And J. Zhu , the WLRLCC algorithm is focused on learning more features for the top retrieved facial images for each query. By weak label regularized local coordinate coding. Retrieval based face annotation is used in mining massive web facial images for automatic face annotation .there are two challenges first is how effectively retrieve most of similar facial images. Second is how to effectively perform annotation. They proposed weak label regularized local coordinate coding (WLRLCC)technique. They also proposed the optimization algorithm i.e. WLRLCC algorithm

Search based face annotation

Now a day's search-based face annotation plays a vital role. Specifically, given a user-uploaded facial image for annotation, the search-based face annotation scheme firstly retrieves a short list of top-K most similar facial images from a large scale web facial image database, and then annotates the query facial image by mining the labels associated with the top-K similar facial images. In general, the search-based face annotation scheme has to tackle two main challenges.
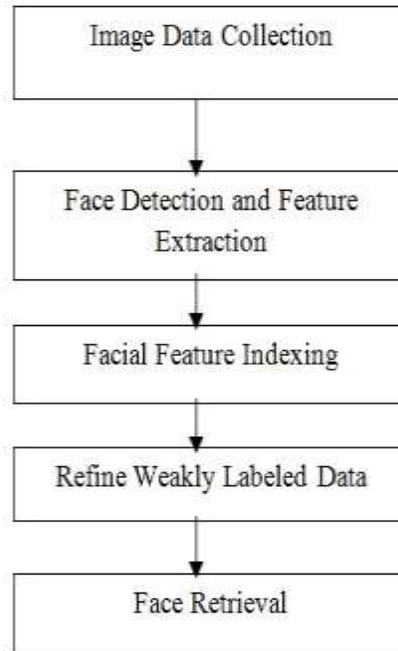

Fig. SBFA

III. Literature survey

Various techniques are present for face annotation in mining weakly labeled facial images from www. This study shows that most of the techniques those accepts name of person as input and process text-based search for achieving face images. Images were first annotated with text and then search using text based approach from traditional database management system. Text based image retrieval system uses traditional database techniques are used to managing images. Through text description, images can be organized by topical or semantic hierarchies to facility easy navigation and browsing base on standard Boolean queries Random Fields have also been studied to name all faces in an image in, e.g., Stone et al [7]. These are classical research problems in computer vision and pattern recognition and have been studied from many years. G.B. Huang et al. [5] designed Labeled Faces in the Wild. Z. Cao et al. [6] presented a novel approach to address the representation and the matching issue in face recognition. In proposed work they firstly worked on approach that encodes the micro-structures of the face by anew learning-based encoding technique. They used unsupervised learning schemes to learn an encoder from the training sets. In next step they applied PCA technique to get a compact face descriptor .X.-J. Wang et al. presented Anno Search scheme, a novel scheme to annotate images using search and data . They solved this problem in two-stages; first is searching for semantically and visually similar images on the internet, and mining annotations from annotation. One accurate keyword is necessary for enabling text-based search for a set of semantically similar images. As final processing step of their work, annotations are mined from the descriptions. These proposed works has benefit that is no supervised process is adopted in this process, and as a result, it handles large amount of vocabulary. It also ensures a highly scalable image database. In their work they mentioned that in follow-up work they

will work on reinforcing the labels of images from large scale database and they are interested to resolve the problem of how to annotate query images without associated keywords [11].

IV. Conclusion

This paper investigated the retrieval-based face annotation problem and presented a promising framework to attack this challenge by mining massive weakly labeled facial images freely available on WWW. To improve the annotation performance, a novel Weak Label Regularized Local Coordinate Coding (WLRLCC) algorithm was proposed, which effectively exploits the principles of both local coordinate coding and graph-based weak label regularization.

Using the achieved representative local coordinate coding and enhanced label matrix, a sparse reconstruction scheme is proposed for face name annotation. We conducted extensive experiments and found that the proposed WLRLCC algorithm achieved encouraging results on a large-scale web facial image tested.

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