

Improved Methodology for Face Annotation Technique

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ABSTRACT

Various face annotation techniques has been still research area in In Image processing with lots of mobility algorithms to design the efficient mobility model. This paper focused on five different techniques such as Collaborative FR for Face Annotation in OSNs, Clustering-Based Approximation, weak label regularized local coordinate coding technique, correlation mining with relaxed graph embedding technique, Robust Multi-Instance Regression Formulation.

This paper proposed a method which is combination of different technique that will help user to search a particular face among the different faces among various samples of faces given.

Keywords— face annotation, content-based image retrieval, machine learning, web image annotation, face detection etc.

I) INTRODUCTION

Different face annotation techniques have been developed. There are various algorithms are present for face detection, face retrieval, face annotation. Many face annotation technique have been developed such as Clustering-Based Approximation, weak label regularized local coordinate coding technique, correlation mining with relaxed graph embedding technique, Robust Multi-Instance Regression Formulation. The development face annotation techniques in online social networks is currently very important for effective management and organization of a large number of personal photos shared on social network. [1] framework of search-based face annotation (SBFA) by mining weakly labeled facial images and this scheme gives information about effective performance of annotation by exploiting the list of most similar facial images and their weak labels that are often are freely available on the World Wide Web (WWW)[2]. This paper, discuss five different face annotation techniques such as Collaborative FR for Face Annotation in OSNs, Clustering-Based Approximation, weak label regularized local coordinate coding technique, correlation mining with relaxed

This paper, the five techniques given which are useful for face annotation having advantages like accuracy, efficiency but it having some disadvantages such as time consumption, pixel size etc to overcome this problem improve version of face annotation technique is proposed here.

II) BACKGROUND

Many face annotation techniques have been done to develop in recent past years. The clustering base approximation technique accelerates the optimization task without any performance degradation. The clustering based approximation technique also improves the scalability [1]. The collaborative FR face annotation in online social network technique can significantly enhance face annotation accuracy and reduce time consumption and also accuracy and efficiency enhance in online social network.[2]. The weak labelled regularised local coordinate coding technique saves the computational time and maintains the performance. This technique also exploits both local coordinate coding and graph base regularization [3]. The performance of LMGE technique is good for three databases and it can be implemented by using matlab and this method is capable for using label and unlabel data.[4]. Robust multi-instance regression gives the set of training face image with multiple face instances. This technique is also important for web scale data mining purpose [5].

This paper introduces five face annotation schemes that is Clustering-Based Approximation, weak label regularized local coordinate coding technique, correlation mining with relaxed graph embedding technique and Robust Multi-Instance Regression Formulation. These are organizes as follows. **Section I** Introduction. **Section II** discusses Background.

Section III discusses previous work. **Section IV** discusses existing methodologies. **Section V** discusses attributes and parameters and how these are affected on mobility models. **Section VI** proposed method and outcome result possible. Finally **section VII** Conclude this review paper.

III) PREVIOUS WORK DONE

In research literature, many face annotation techniques have been studied to provide various annotation schemes and improve the performance less time consumption, accuracy, robust and secure. De Young Wang et al. [1] have proposed the weak label regularized local coordinate coding technique in which two optimization tasks of sparse feature learning and label enhancement are performed separately and WLRCC scheme use to reinforce the two learning tasks via a unified optimization framework. Shih-Chia Huang et al. [2] has proposed the collaborative face recognition technique which has been trained with the personalized social network context and information of each member in online social network. Ying He et al [3] has proposed Retrieval-Based Face Annotation by Weak Label Regularized Local Coordinate Coding face annotation. Yi Yang et al. [4] has proposed Web and Personal Image Annotation by Mining With Relaxed Visual Graph Embedding . Bingbing Ni et al. [5] has proposed. Image and Video Mining Towards Universal and Robust Age Estimator.

IV) EXISTING METHODOLOGIES

Many face annotation schemes have been implemented over the last several decades. There are different methodologies that are implemented for different face annotation schemes. Clustering-Based Approximation, weak label regularized local coordinate coding technique, correlation mining with relaxed graph embedding technique, Robust Multi-Instance Regression Formulation.

Clustering-Based Approximation: The number of variables in the previous problem is $n \times m$, where n is the number of facial images in the retrieval database and m is the number of distinct names (classes). For a small problem, we can solve it efficiently by the proposed MGA-based algorithms (SRF-MGA or CCFMGA). For a large problem, we can adopt the proposed CDA-based algorithms (SRF-CDA or CCF-CDA), where the number of variables in each subproblem is n . However, when n

is extremely large, the CDA-based algorithms still can be computationally intensive. [1].

Collaborative FR face annotation in online social network: Collaborative FR for Face Annotation in OSNs: This technique shows collaborative FR framework which features two collaborative FR strategies for face annotation in a distributed OSN: the owner with a HPR strategy and the WMR strategy. This method constructs a personalized face recognizer which has been trained with personalized social network context and information for each member in a distributed OSN. To produce a high-reliability identity label for face annotation, it introduces the collaborative face recognizer which is able to effectively merge multiple personalized face recognizer results, before describing the two collaborative FR strategies. [2].

Weak label regularized local coordinate coding technique: two optimization tasks of “sparse feature learning” and “label enhancement” are performed separately. Specifically, the sparse features S are first learned from the optimization in (1), and then used by the optimization in (3) to refine the label matrix Y . To better exploit the potential of the two learning approaches, we propose the WLRCC scheme, which aims to reinforce the two learning tasks via a unified optimization framework [3]. **Label correlation mining with relaxed graph embedding technique:** The possible extensions of LMGE proposed in this paper and the relationship between our framework and some other related works **Extensions of LMGE:** In our framework, we have used the east-squares loss. Some other loss function, such as hinge loss and logistic loss, could also be used in our framework. However, the optimization for these loss functions is much more complicated.[4]. **Multi-Instance Regression Formulation :** Robust Multi-Instance Regression Formulation In this paper robust multi-instance regression method with noisy labels (RMIR) and the direct Gaussian kernel regression (GKR) technique is proposed. Instead of explicitly enforcing that each image, referred to as bag within the context for multi-instance learning, has at least one face instance with the given age, we impose a soft constraint, that is, we allow some bags to contribute no face instances with the given ages. with noisy labels (RMIR) and the direct Gaussian kernel regression [5].

V) ANALYSIS AND DISCUSSION

The clustering base approximation technique accelerates the optimization task without any performance degradation. The clustering based approximation technique also improves the scalability [1].

The collaborative FR face annotation in online social network technique can significantly enhance face annotation accuracy and reduce time consumption and also accuracy and efficiency enhance in online social network.[2].

The weak labelled regularised local coordinate coding technique save the computational time and maintain the performance. This technique also exploits both local coordinate coding and graph base regularization [3].

The performance of LMGE technique is good for three databases and it can be implemented by using matlab and this method is capable for using label and unlabeled data.[4].

Robust multi-instance regression gives the set of training face image with multiple face instances. This technique is also important for web scale data mining purpose [5].

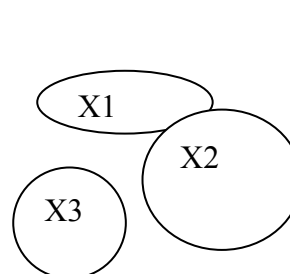
TABLE 1: Comparisons between different face annotation schemes.

Annotation scheme	Advantages	Disadvantages
Clustering-Based Approximation	This method significantly enhances face annotation accuracy and dramatically reduce time consumption.	Single FR classifier may cause unfavorable accuracy results under uncontrolled conditions.
collaborative for face annotation in online social network	Collaborative face annotation gives high efficiency and high accuracy for personal photo collections shared on OSNs.	The accuracy in selecting the image is quiet less.

weak label regularized local coordinate coding technique	This method significantly enhance face annotation accuracy and dramatically reduce time consumption.	The query person is not well known, the relevant facial images on the internet may be very limited.
Weak label correlation mining with relaxed graph embedding technique	This method is capable of utilizing both labeled and unlabeled data	This technique does not consider correlations among different class labels
Robust Multi-Instance Regression Formulation	robust multiple instance regression is use for handling Both noisy images and labels.	one database cannot be applied to another small-size databases lack the generalization capability.

VI) PROPOSED METHODOLOGY

Many face annotation techniques has been used such as Collaborative FR for Face Annotation in OSNs, Clustering-Based Approximation, weak label regularized local coordinate coding technique, correlation mining with relaxed graph embedding technique, Robust Multi-Instance Regression Formulation, each of which has its own special characteristics. In collaborative face annotation technique face recognizer is used and in clustering base technique the clustering technique for naming the image is used. Hence the proposed method is combination of collaborative face annotation and clustering based approximation technique in which collaborative face recognizer gives the approximate face image and clustering technique use to give naming to the images. following figure shows the clustering framework



Future work will include the new scheme to improve the generalisation capability of the images.

fig1: clustering technique

In fig 1. X1, X2 ,X3 are the classes which is use to identify the similar naming images .The collaborative face annotation technique is having high efficiency and high accuracy. In this technique the databases for images is used.

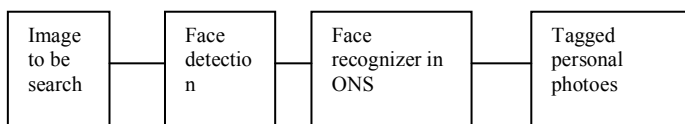


Fig 2. collaborative face annotation system

In the above technique the image to be search is detected by using face detection then it is passing through the face recognizer and finally tagged image is obtained. There are various algorithms for image detection and retrieval of the image. This technique is efficient and accurate in face annotation process.

OUTCOME POSSIBLE RESULT

The proposed method is useful to reduce the noise and enhance the scalability in face annotation process.

VII) CONCLUSION

This paper focuses on study of various face annotation scheme i.e. Collaborative FR for Face Annotation in OSNs, Clustering-Based Approximation, weak label regularized local coordinate coding technique, correlation mining with relaxed graph embedding technique and Robust Multi-Instance Regression Formulation. There are some disadvantages of this techniques such as naming to the images and noise factor so to overcome this problems the new method is proposed here.

FUTURE SCOPE

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