IMAGE SECLUSION TRESPASSING IN ON - LINE SOCIAL NETWORK USING DIGITAL SIGNATURE TECHNIQUES

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Abstract - On - line social network is a platform used by people to communicate with each other. In contrast to images, users often limit their On - line profiles from the public on social media platforms due to privacy concerns by providing access rights. To sharing information such as image, messages and so on. Implement privacy protection system for sharing information. Provide privacy to sharing images using water marking technique.

Keywords **- Big data system, User-shared images, Connection, Discovery, Recommendation, Social network analysis.**

I. INTRODUCTION

Computer forensics is the application of investigation and analysis techniques to gather and preserve evidence from a particular computing device in a way that is suitable for presentation in law. Includes the sciences, technologies, and applications relating to information forensics, information security, biometrics, surveillance and systems applications that incorporate these features. USER connection is useful information for many person- alized services or applications in On - line social networks. Such connections can be any type of On - line social relation- ship formed from some interactions between users in a social network, such as On - line friendship, a follower/followed relationship or a membership in the same community. Companies like Twitter and Pinterest, already have explicit information about user On - line friendships (i.e., social graphs) to improve their service relevance to users.

Most users are unaware of the privacy risks relating to shared images, as they do not directly disclose characteristics such as gender and origin. Recently, however, user shared images have been proven to be an accessible alternative to social graphs for On - line friendship recommendation and gender identification. As shared images can reflect user characteristics such as gender and follower/follower relationships, applications such as recommendation and marketing may be possible, even without access to an SG. It was to be avoided by providing the access rights to the users by the user who are posting the sensitive images.

II. RELATED WORK

Taking each of these points into account, we propose the following as a minimal set of features that a model of social network evolution should have,

1. Fixed number of vertices: we consider a closed population of fixed size.
2. Limited degree: the probability of a person developing a new acquaintance should fall off sharply once their current number of friends reaches a certain level.
3. Clustering: the probability of two people becoming acquainted should be significantly higher if they have one or more mutual friends.
4. Decay of friendships: Given that the number of vertices is fixed, and the degree is limited, friendships must be broken as well as made if the evolution of the network is not to stagnate.

In the following sections we propose and study two models which have these properties. The first model is quite general in its formulation, allowing for arbitrary functional forms representing people's propensity to form friendships.

BOF-BASED TAGGING

BoF has been a popular approach to many computer vision tasks because of its simplicity BoF is a method to represent images into feature vectors of local image descriptors. Fig. 2 is the process of the proposed approach in which is the use of BoF in this work. The different parts of the BoF tagging are introduced in this section.

A. Feature Extraction Feature extraction is a process to obtain the local features in These features can be detected by Harris Affine detector, or Maximally Stable Extremely Regions detector. The extracted features are relatively consistent with viewing angles and lighting conditions. They are represented in a way that is independent of the size and orientation, such as scale invariant feature transform (SIFT) .

B. Codebook Generation Codebook generation is a process to obtain the visual words that can represent the features obtained in the feature extraction in It is a clustering process that groups similar features. The codebook generation is an offline process that does not need to be updated in real time.

C. Feature Coding and Pooling Feature coding is to encode features with the visual words. Each feature in every image is represented by a visual word in feature coding. The images are then represented by a feature vector in the feature pooling. This process is carried out in encoding the images in the dataset One of the most common approaches is using the histogram that counts the number of occurrences of each visual word in the image.

D. Clustering and Tagging The goal of clustering is to group images with similar feature vectors, that is, group images that are visually similar. Each cluster obtained in this operation corresponds to similar objects to which an auxiliary tag is assigned. After obtaining the cluster , the images in any cluster are assigned with the same auxiliary tag to reflect that they are visually similar and belong to the same group. It is an unsupervised operation no assumption is made or information on the image is known.

IMPLEMENT CLASSIFICATION ALGORITHM

Short Text Classification to classify the messages whether is positive or not Also filter short terms which are trained in big data base. Real time mobile intimation Block friends by predefined threshold value. If they posting too much of comments they will be warned at first time and after sometime they blocked automatically from the user. Among different types of content recommendation, friendships, or connections among people, is one the most important and fundamental functions. This problem has long been studied. One of the possible ways to make the recommendation is by the existing connections among people . However, this may limit the recommendations from millions of users as the connections among users may not available. Friendship recommendation is also possible with user interests inferred from user input or user generated content and other personal information. Interests are combined with the existing connections with a machine learning algorithm in for recommendation. In the authors focus on how to make use of the group information on for friendship recommendation.

III. SYSTEM ARCHITECTURE OVERVIEW

In this service we can create social framework which contains image owner, server and image users Image owner can be upload the images into server store all images in storage system Uploaded images can be shared by multiple users Images are read in the form pixel values Pixel Selecting image pixel location for add watermark into image Using Discrete Wavelet transform algorithm to embed the water mark into image Owner can be set the privacy as with protection or without protection Authorized users only download the images in without privacy settings Unauthorized user only view the image and can't be used If he download means, only get water mark values Then disable the mouse operations and system print screen options Rules are generated by server for setting threshold values Based on threshold values, we can block friends who are provide negative comments Finally provide mobile intimation to users.

A. IMAGE CATEGORIZATION:

We are introduced the privacy policy by providing the access rights to the users. Depend on the privacy of images we are considering two kinds of images which are sensitive images and non-sensitive images.

SENSITIVE IMAGES:

The user declare the images as sensitive image will mean it will be embedded with the watermark and the image was very protected and so the admin user who are posted the image should only have the rights to give the permissions to the other users to download the images. Otherwise the images will not be download by other users. Unauthorized users only get watermark at the time of download

NON-SENSITIVE IMAGES:

If the user declare as a non-sensitive image will mean it was accessible by everyone and it will not need any access rights from admin user.

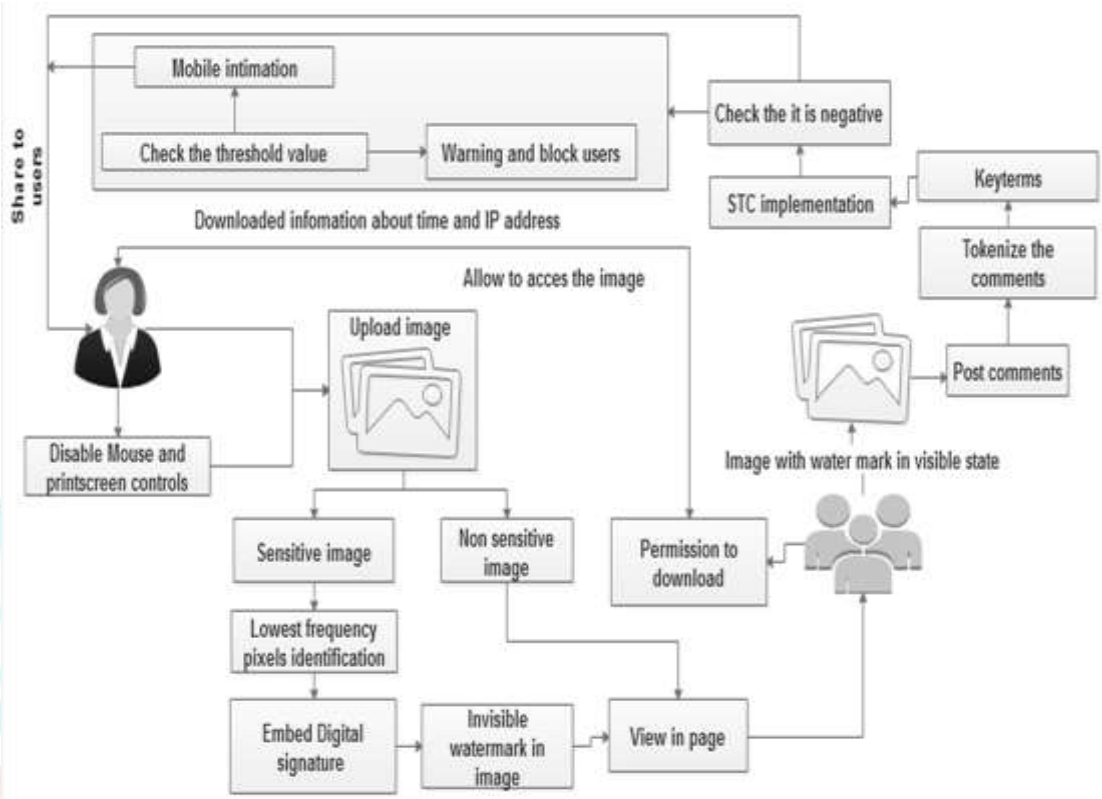

Figure 1.1: The architecture of system

B. ACCESS RIGHTS:

The admin user only have the rights to give the permissions to the requested users to download the images. If the admin will give the permissions by accept the request then only the requested user can download the images. If the admin user denied the request will mean the requested user cannot download the image. If they click the image only the watermark was visible in the image. Without the permissions of admin user , the requested user was unable to download the image.

DISABLE OPTIONS:

There is a chance in the social networks WebPages by right clicking the mouse and click save as images. So we are disabling the keyboard and mouse events at the image portions only when sensitive images are posted by the users.

C. COMMENTS BLOCKING STRATEGY:

In the social networks, posting the comments is a regular and common activities. Social media is public. Every time someone writes badly about your product or services, the whole social media audience can see it. People will judge you based on several criteria: how quickly did you respond, what was your reaction, how did the whole thing end. You might think that no one will notice one negative review, but people definitely will! And should you not react, they will draw a conclusion, they created some bad impressions on you. You might think that no one will notice one negative review, but people definitely will! And should you not react, they will draw a conclusion, they created some bad impressions on you. In order to avoid this problem, we have a classification algorithms for sentimental analysis.

IV. METHODOLOGY:

DIGITAL SIGNATURE TECHNIQUES:

" Digital Signature " is the process of hiding digital information in a carrier signal; the hidden information should but does not need to, contain a relation to the carrier signal.

Digital watermarks may be used to verify the authenticity or integrity of the carrier signal or to show the identity of its owners. It is prominently used for tracing copyright infringements and for banknote authentication. For marking media files with copyright information, a digital watermark has to be rather robust against modifications that can be applied to the carrier signal. Instead, if integrity has to be ensured, a fragile watermark would be applied.

Watermark--an invisible signature embedded inside an image to show authenticity or proof of ownership Discourage unauthorized copying and distribution of images over the internet.

DISCRETE WAVELET TRANSFORM:

It is any wavelet transform for which the wavelets are discretely sampled. As with other wavelet transforms, a key advantage it has over Fourier transforms is temporal resolution: it captures both frequency and location information. For wavelet transforms, they are different translations and dilations of one function termed the Mother wavelet along with a scaling function (each spanning a logarithmically reduced subinterval). These are possible due to their frequency localization, thus allowing us to obtain frequency information about the signal being analyzed. The wavelet transform basis functions are compact, or finite in time.

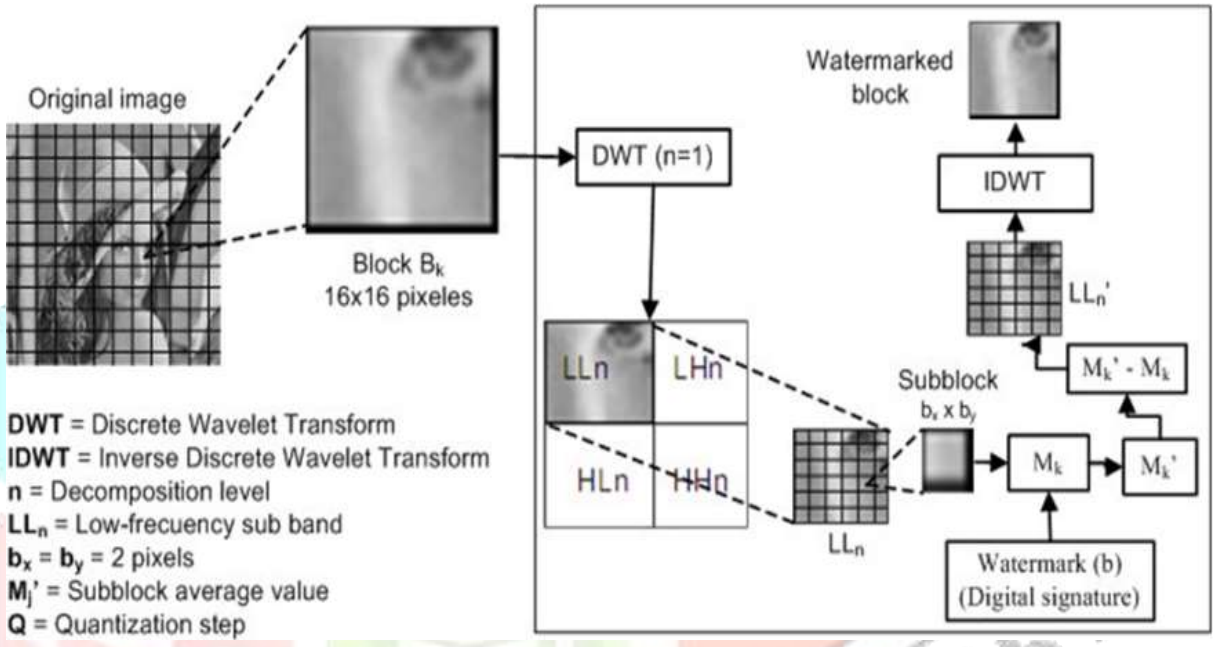

Figure 1.2: The architecture of Discrete Wavelet Transform

DWT STEPS:

1.The input image is decomposed into sub bands using DWT, the input image of size *N x N (i.e 16*16)* is decomposed into 1-level further the four sub bands is decomposed into 8 sub bands using DWT, the decomposed sub bands are reorganized into column matrix.

2.The compressed image is further decompressed using the output layer(compressed output and decompressed output are not shown in the figure).

3.The decompressed output from the output layer is rearranged and **watermark was to be embedded into the images and then the** inverse DWT is performed , the second level inverse DWT is performed and the final output is reconstructed to obtain the original image.

4.In this proposed architecture, the input image is first decomposed into multiple sub blocks using hierarchical DWT architecture.

Attribute	Description
Imageid	*The unique id for the image*
Tag	*The set of user annotated tags*

Table i: major attributes for image

Attribute	Description
Userid	*The unique id for the user*
Imageuploaded	*The set of images uploaded by the user*
Friendlist	*The user id of the user friends*

Table ii: major attributes for users

5. The aim of the current work is to evaluate an automated system, called Filtering Wall (FW), capable to filter unnecessary messages from online social network user walls. It make use of *Short Text Classification* text classification techniques to assign with each short text message a set of categories based on its content . The construction of robust short text classifier is on the basis of withdrawal and choice of a set of characterizing and also on discriminating features. Earlier work are also refer to find the solution in this paper and also elicitation procedure and learning model are also inherited in this work for giving pre-classified data.

V. SHORT TEXT CLASSIFICATION

Proposed system is placed in the second and third layer according to the reference architecture. By using GUI users interact with the system to set up and manage their filtering rules and black lists. Moreover, the GUI provides users with a filtering wall which publish messages that are certified according to their filtering rules and black lists. The core components of the system are the Short Text Classifier (STC) . The first component refers the STC module which uses message categorization to enforce the FRs specified by the user. Black lists can also be added to enhance the filtering process the system execution path, and can be summarized as follows:

Step 1- A user post the message on commend wall.

Step 2- Short Text Classification module checks each word of the message.

Step 3- If word is good message is posted on wall else it will be rejecting using Blacklist only of user .

Step 4- then filtered message is posted on general walls, if more time it will post then automatically black the user.

DATASET AND EXPERIMENTAL SETUP:

The setting of the experiment A set of 201006 images uploaded by 542 users OSN an for image sharing with millions of images uploaded, and different methods are used to annotated those images. The users are need to selected from images under the same tag query page to provide diversity. The label distributions for different methods are obtained, and the similarities are calculated accordingly Then connections among users are inferred from the similarities. Tables I and II show the attributes scraped for the users and the images.

FILTERED RULES IMPLEMENTATION:

Rules are generated by server for setting threshold values based on threshold values, we can block friends who are provide negative comments finally provide mobile intimation to users.

BLOCKED LIST:

By applying the BL rule ,owner can identify which user should be blocked based on the relationship in OSN and the user's profile. The user may have bad opinion about the users can be banned for an uncertain time period. We have two information based on bad attitude of user. Two principle are stated. first one is within a given time period user will be inserted in BL for numerous times, he /she must be worthy for staying in BL for another sometime.

VI. COMPARATIVE STUDY

Title	Techniques	Merits	Demerits

Connection discovery using big data of user-shared images in social media	Bag-of-features tagging (BoFT	Recommendation based on user shared image	Difficult to analyze long term impact
Non -user generated annotation on user shared images for connection discovery	Color-based and feature-based methods.	Discovered connections of images	Annotated tags are not available.
Evaluation of gist descriptors for web-scale image search	GIST descriptors	Find part of the relevant images	Need large number of datasets
Imagenet classification with deep convolutional neural networks	Deep Convolutional Neural Networks	Provide supervised learning	Computational complexity is high
Return of the devil in the details: Delving deep into convolutional nets	Convolutional Neural Networks (CNN)	Good indicator of image analysis	Reproduce irrelevant results
Convolution architecture for fast feature embedding	Feature Embedding framework	Object classification on images	Need large number of image descriptors
Measurement and analysis of On - line social networks	Graph based approach	Symmetric link creation process.	Difficult to analyze heterogeneous nodes
igslr: personalized geo-social location recommendation: a kernel density estimation approach	Geographical influence with Kernel density estimation	User's check-in behavior can be implemented	Difficult to extract GPS data

ADVANTAGES:

- Provide privacy to uploaded images
- Complexity is less
- There is no predefined policies to images
- Can be implement in real time environments
- Easily block negative comments

X. CONCLUSION

In this paper Implemented Privacy social network to provide guard system to images which are uploaded by users Only authorized person get original images Disable the possibilities to use images which are posted by users Block the unwanted messages from user home pages. In future, we can extend the work to implement image privacy with hardware system. Can implement sensors to block the various mobile snapshots and implement message privacy with various languages.

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