

Privacy Policy Inference of User-Uploaded Images on Content Sharing Sites

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Abstract: With the increasing number of images users share through social sites, maintaining privacy has become a major problem. Users find very difficult to keep control on the privacy of their shared contents and end up inadvertently losing the privacy of their shared content. To address this issue we propose a system which will not only provide user with self-designing of privacy policy for their shared images but also the system will itself use the history result and provide a privacy policy for new users. The system will use data mining algorithm to access the history dataset and predict a privacy policy for new user accessing the data. System will also provide user with refined searching approach for image search where user can submit an image or query or both together to get expected output which will be set of images. Our system will be provide user with secure access to images with privacy policy changing as per user thus making owners data safe and secure.

Keywords: Privacy, photo sharing, online content, social network

I. INTRODUCTION

Image sharing is done by users for different purpose and intent but behind all one thing is clear that each and user wants other users to access their images in a safe and secure manner without breaching the user's privacy. This gives rise to unwanted disclosure and privacy violations. Many a time's user's uploaded images are used and edited without the permission of owner of that image. This takes palace on regular basic and users are left helpless with privacy and protection of their images. The online medium used by the users to share the contents makes it very easy for other users to collect, edit, and reuse images of other users without any permission or notice of the owner of that image. The persistent nature of online media makes it possible for other users to collect rich aggregated information about the owner of the published content and the subjects in the published content Many times the images exposes users' family information such as his family members and home with can be used for big reasons which have been noticed in the past. Most content sharing websites allow users to enter their privacy preferences. Unfortunately, recent studies have shown that users struggle to set up and maintain such privacy settings. Many users do not even know that there is provision for setting the privacy policy for their contents. Therefore, many have acknowledged the need of policy recommendation systems which can assist users too easily and properly configure privacy settings. But many users fail to set appropriate privacy policy for their images due to lack of knowledge or awareness. This gives rise to a system which will not only allow user to set their own privacy policy but also predict and restrict new users based on the history data available. The system will decide policy on its own for new users trying access to the images and thus the privacy of the images will be protected. The system will also cover the aspect of providing user with refine searching of images with bi-modal query approach.

II. LITERATURE SURVEY

• Privacy Policy Inference of User-Uploaded Images on Content Sharing Sites

We examine the role of social context, image content, and metadata as possible indicators of users' privacy preferences. We propose a two-level framework which according to the user's available history on the site, determines the best available privacy policy for the user's images being uploaded. Our solution relies on an image classification framework for image categories which may be associated with similar policies, and on a policy prediction algorithm to automatically generate a policy for each newly uploaded image, also according to users' social features. Over time, the generated policies will follow the evolution of users' privacy attitude. We provide the results of our extensive evaluation over 5,000 policies, which demonstrate the effectiveness of our system, with prediction accuracies over 90 percent

• **Over-Exposed? Privacy Patterns and Considerations in Online and Mobile Photo Sharing**

In a first-of-its-kind study, we use context-aware cameraphone devices to examine privacy decisions in mobile and online photo sharing. Through data analysis on a corpus of privacy decisions and associated context data from a real-world system, we identify relationships between location of photo capture and photo privacy settings. Our data analysis leads to further questions which we investigate through a set of interviews with 15 users. The interviews reveal common themes in privacy considerations: security, social disclosure, identity and convenience. Finally, we highlight several implications and opportunities for design of media sharing applications, including using past privacy patterns to prevent oversights and errors.

• **Privacy Suites: Shared Privacy for Social Networks**

Creating privacy controls for social networks that are both expressive and usable is a major challenge. Lack of user understanding of privacy settings can lead to unwanted disclosure of private information and, in some cases, to material harm. We propose a new paradigm which allows users to easily choose "suites" of privacy settings which have been specified by friends or trusted experts, only modifying them if they wish. Given that most users currently stick with their default, operator-chosen settings, such a system could dramatically increase the privacy protection that most users experience with minimal time investment.

III. PROPOSED SYSTEM

Photo sharing is an attractive feature which popularizes Online Social Networks (OSNS). Unfortunately, it may leak users' privacy if they are allowed to post, comment, and tag a photo freely. We attempt to address this issue and study the scenario when a user shares a photo containing individuals other than him/her. Main objective of our system are as follows:

- The main objective of the system is to provide privacy to users uploaded images.
- Provide owner of the image rights to assign custom access policy to users according to his requirement.
- Provide system prediction of access policy to any image when any user other than owner is accessing the image.
- Provide refined searching option to user to search image faster and according to their requirement.

The concept of privacy setting which recommend to users a suite of privacy settings that "expert" users or other trusted friends have already set, so that normal users can either directly choose a setting or only need to do minor modification. Automatically extract privacy settings from the social context within which the data is produced. Privacy preference based on location and time of user accessing the image. Based on keywords or caption which are used on social sites to decide the privacy policy

IV. SYSTEM ARCHITECTURE

Following diagram is our system's architecture diagram:

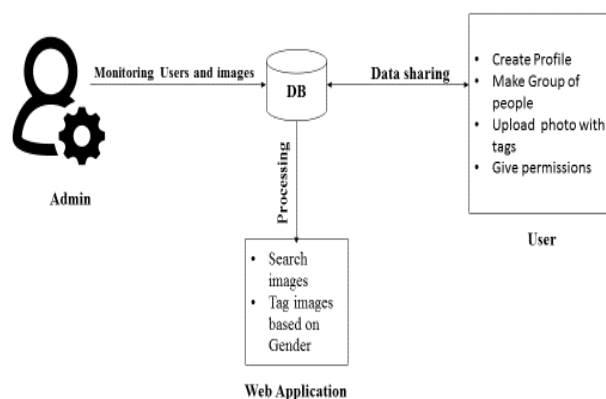


figure 1: system architecture

In this system user will create own profile. User can make group of people or channels. User will upload photo with tags and provide permission for viewer like view, likes, comments, download, public/private and share. Admin has authorities for add images to database and can view the users and images uploaded by user with privileges. User can search images for which they can give input as image or text. Image tags will be categorized based on gender and age of user and accordingly result will be shown to user.

V. METHODOLOGIES

The system will decide policy on its own for new users trying access to the images and thus the privacy of the images will be protected. The system will also cover the aspect of providing user with refine searching of images with bi-modal query approach.

In this work, we propose an Adaptive Privacy Policy Prediction (A3P) system to help users compose privacy settings for their images. In particular, we examine the role of image content and metadata as possible indicators of user's privacy preferences. We propose a two –level image classification framework to obtain image categories which may be associated with similar policies. Then, we develop a policy prediction algorithm to automatically generate a policy for each newly uploaded image.

Decision-making (also spelled decision making and decision making) is regarded as the cognitive process resulting in the selection of a belief or a course of action among several alternative possibilities. Every decision-making process produces a final choice, which may or may not prompt action.

Decision-making is the process of identifying and choosing alternatives based on the values, preferences and beliefs of the decision-maker. The major part of decision-making involves the analysis of a finite set of alternatives described in terms of evaluative criteria. Then the task might be to rank these alternatives in terms of how attractive they are to the decision-maker(s) when all the criteria are considered simultaneously

VI. ADVANTAGES

- User friendly system
- Make user`s account secure
- To reduce the computational complexity and protect the private data of user.
- It is very efficient than existing system
- The system can reduce the privacy leakage

VII. CONCLUSION

Photo sharing is a standout amongst the most prominent elements in online social networks, for example, Facebook. Sadly, thoughtless photograph posting may uncover protection of people in a posted photograph. We have proposed an Adaptive Privacy Policy Prediction (A3P) system that helps users automate the privacy policy settings for their uploaded images. We are using Decision making algorithm based on the information available for a given user. To prevent possible privacy leakage of a photo, we design a mechanism to enable each individual in a photo be aware of the posting activity and participate in the decision making on the photo posting.

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