International Journal of Engineering Research
Volume No.5, Issue No.7, pp : 627-629
ISSN:2319-6890)(online),2347-5013(print)
1 July 2016

Empowering Users with Adaptive Privacy Policies for the Uploaded Images

Tanuja Dhope , Mohini Shinde
Department of E&TC Engineering
G.H. Raisoni College of Engineering & Management, Wagholi Pune , SavitribaiPhule Pune University, Pune
tanuja.dhope@raisoni.net , mohinishinde8@gmail.com

Abstract: In todays generation images are most important part of user's connectivity with each other. Because of this privacy has become a big problem. So user needs framework which gives controlled access and privacy to their shared images. Best Available Policy Prediction (BAP) system gives opportunity to users to find privacy policy for to users social sites images. Using available history on social site, BAP framework finds nearest suitable security policy for images user wants to upload. This BAP framework also handles the issues related to cold start and social sites information leveraging.

Keywords*: Online Social Networks (OSNs), Best Available Policy Prediction (BAP), Content Based Image Retrieval (CBIR), Multiuser Access Control (MPAC)

I. INTRODUCTION

Online social media networks (OSNs) becoming a very wide in recent years. With the growing number of images users share on social sites, providing security to the online sharing images and personal information has become a important problem. With respect to these incidents, the need of such a framework which will help users in provingprivacy to their shared content [1].While networks of social media allow users to limit shared data access but do not give any mechanism to give privacy prediction with multiuser [2]. In todays generation images are most important part of user's connectivity with each other. (CBIR) Retrieval of image on Content Basis is a method which helps to identify digital image by visual content basis interest e.g color and also index the image [3]. The contents which are visible of the images in the stored image database are identified and given by multi-dimensional vectors which ere feature vectors [4].

Most of the content sharing social websites allow users to assign their privacy preferences to provide privacy policies. But, recent studies have shown that some problems are faced by user in this because given information shared by this process may be tedious ie time consuming and error-prone (with errors) [5]. Therefore, there is a necessity of security policy systems which can give users a best available privacy policy. But, previously existing frameworks which provides settings for privacy automation, appear to be not efficient to give the unique final privacy settings for the images [6][7].

Toward addressing this need, a (BAP) that is Best Available Policy Prediction system is proposed to help users in finding out privacy context for their social media images. This examines the role of social event, content of image, and metadata of image considering them users privacy priority indicators [8]. A BAP system proposes a framework which finds out the best available privacy policy which is secure depend on the user's available history on the social site. This BAP output is for the user's social images being uploaded. This work gives classification of privacy-aware social images using a mixed set of characteristics, with content information of image and data used in image storing ie meta-data. Proposed Best Available Policy Prediction (BAP) system provides a problem free privacy solutions experienced by generating users security policies

III EXISTING SYSTEM

A privacy recommender system finds out the social media website's privacy policies using ontology. The main goal is empower user with human readable privacy policies or recommendations which are produced for users [9].

This system uses the ontology engine that having 2 intelligence bases, out of which one have collection, use and individual data/personal data discloser and second is information or knowledge about particular domain or application [10]. But in this user can use privacy policies only which are recommended by the recommender system and user cannot create their own policies.

IV. PROPOSED SYSTEM

A users can give their content discloser privacy priorities with socially connected all users with privacy policy. For this two level framework is introduced called as Best Available Policy Prediction that is BAP system which gives users a hasslefree i.e without trouble, privacy experience.

The BAP framework consists of two main modules:

1. BAP--primary : two major parts in BAP--primary:
   (i) Classification of Image
   (ii) Best Available policy prediction.
2. BAP--secondary.

All data flowing through framework is the following.

- At the starting image is passed to BAP-primary. BAP--primary identifies class of image and find out a need to use BAP--secondary.
- The BAP--secondary classifies users depend on social context and privacy preferences into social communities context , and keep watching social

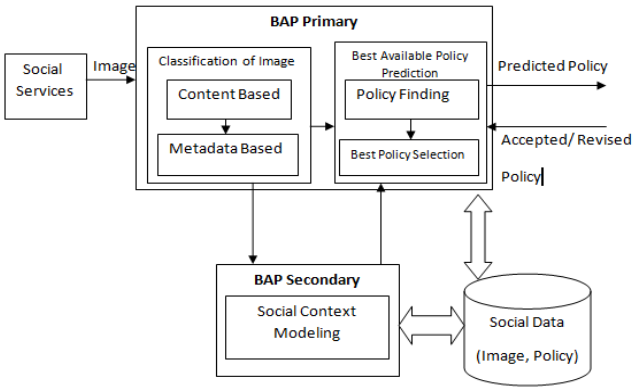

Figure 1 : Best Available Policy Prediction (BAP) system Architecture

ISSN:2319-6890)(online),2347-5013(print)
1 July 2016

context groups. BAP-- secondary is called whenever it needs; BAP-- secondary identifies the social context of user and return back group information to BAP-primary for policyprediction.

- The predicted policy will be displayed to the user at the last. If the predicted policy is most satisfactory to the user, he or she can just accept it. Otherwise, the policy is revised by the user. The original policy is stored in system database ie policy repository for future use.

Let P is privacy policy of user u which having followingcomponents:
$U = \{u_1, u_2, \ldots, u\}$set of users socially connected to A.
$I = \{i_1, i_2, \ldots, i_n\}$ image items set that shared by u.
$S = \{s_1, s_2, \ldots, s_n\}$ activity set which contains actions granted by A to U on I.
$C$is socialcondition which must be satisfied for granted actions and having Boolean expression.

A. **Policy Finding**
In policy finding hierarchical mining method [11] is used which is carried out for the new image within the same category. These new images come under same privacyprotection.
Step 1. For same type of new image, carry out association rule finding on the groups component.
Let U denote the groups coming in policiesΓ_i^{sub} .The identified most popular groups rules indicated by R_i^{sub} . For each policy output set, Γ_i^{sub} conductassociation rule finding on each activity.
Step 2. Association rule mining on the activity is conducted.
Select rules R_j^{act} as pop ular combination of actions. And remaining policies are denoted asΓ_j^{act} .
Step 3. Find term component in each set for the attributes.
Proceed for mining process to find term in each setΓ_j^{act} . Let $\{attr_1, attr_2, \ldots, attr_n\}$ denotethe distinct value in term component of policies in Γ_j^{act} . Again select rules having one value denoted as R_k^{com} from policiesΓ_k^{com} .
Step 4. Generate result policies needed to perform all elements in corresponding best rules.

B. **Best Policy Selection**
This is used to choose better result policy related to user privacy views and needs. To find out user privacy tendency, strictness level SL is used which is integer with minimum value is 0. If value of SL is lower, then strictness level is higher.
Step1: Compute all candidate policy's strictness levels.
$SL = \iota - (1 - \alpha)$, where α is coverage rate ranging from 0 to 1.
Step2: Compute the average strictness level $SL_{avg} = \frac{\sum_{i=1}^{N_p} L_{p_i}}{N_p}$, where L_{p_i} denote strict level of resultpolicy p_i, and N_p isthe final number of policies that satisfy$|SL_{p_i} - SL_{avg}| \leq \xi$.
Step3: Compute expected strictness level $SL_{exp} = SL_{avg}(t_l) + (t_c - t_l).\frac{dL_{avg}}{dt}(t_l)$

V RESULT ANALYSIS

The best policy selection algorithm gives best policy for reference. For policy finding hierarchical mining approach is used where it returns the most promising policy to the user. A social context modeling algorithm search valueof terms in the inverted ie hierarchical file and find out social site groups of the candidate. Finally, update information of social media group with new user as a conditional member. We are evaluated time require for search any image using metadata and content search.

No. of images stored into Database	Search Time for Metadata search (ms)	Search Time for Content (ms)
20	150	140
40	198	185
60	245	266
80	456	450
100	574	512

Table 1: time require for search any image using metadata and content search

Outcome:

- Recommend better images according to user history.
- Search image effectively using content or metadata search query.

VI CONCLUSSION

The proposed system i.e. Best Available Policy Prediction (BAP) system helps user to find the privacy policies for social media uploaded images. This BAP framework also handles the problems of leveraging social context information and cold-start. Best available privacy policy accuracy is increased with more social user data and a longtime execution of BAP system.

ACKNOWLEDGEMENT
I like to thanks people for helping me for giving important guidance about project work. I am very thankful to journal for allowing me best opportunity to publish my paper. I am sincerely thankful to my (HOD) head of department, my project guide and other staff members for supporting me.

REFERANCES

i. "Privacy Preserving Policy-Based Content Sharing in Public Clouds"- Mohamed Nabeel, IEEE, Ning Shang, and Elisa Bertino, Fellow, IEEE-IEEE Transactions On Knowledge And Data Engineering, Vol. 25, No. 11, November 2013

ii. "Multiparty Access Control for Online Social Networks: Model and Mechanisms"- Hongxin Hu, IEEE, Gail-JoonAhn, IEEE, and Jan Jorgensen IEEE transactions on knowledge and data engineering, vol. 25, no. 7, july 2013

iii. Emiliano De CristofaroPARC, Claudio SorienteETH Zurich , Gene Tsudik Andrew WilliamsUC Irvine UC Irvine 2012 IEEE Symposium on Security and Privacy "Hummingbird: Privacy at the time of Twitter"

iv. Image Processing: Principles and Applications—TinkuAcharya and Ajoy K. Ray (Hoboken, NJ: Wiley, 2005, pp. 448, ISBN: 0-471-71998-6). Reviewed by Francesco Camastra, Book Reviews IEEE transactions on neural networks, vol. 18, no. 2, march 2007

ISSN:2319-6890)(online),2347-5013(print)
1 July 2016

v. *K. Lerman, A. Plangprasopchok, and C. Wong, "Personalizing image search results on flickr," CoRR, vol. abs/0704.1676, 2007.*

vi. *Dong Liu, Shuicheng Yan, Senior Member, IEEE, Xian-Sheng Hua, IEEE, and Hong-Jiang Zhang, Fellow, IEEE "Image Retagging Using Collaborative Tag Propagation" IEEE Transactions On Multimedia, Vol. 13, No. 4, August 2011*

vii. *Yongdong Wu, Zhuo Wei, and Robert H. Deng - "Attribute-Based Access to Scalable Media in Cloud-Assisted Content Sharing Networks" IEEE Transactions On Multimedia, Vol. 15, No. 4, June 2013*

viii. *"A Privacy-Preserving Framework for Large-Scale Content-Based Information Retrieval"-Li Weng, IEEE, Laurent Amsaleg, April Morton, and StéphaneMarchand-MailletIEEETransactions On Information Forensics And Security, Vol. 10, No. 1, January 2015*

ix. *Jianping Fan, Daniel A. Keim, YuliGao, HangzaiLuo, and Zongmin Li "JustClick: Personalized Image Recommendation via Exploratory Search From Large-Scale Flickr Images "IEEE transactions on circuits and systems for video technology, vol. 19, no. 2, february 2009*

x. *Curtis RasmussenSchool of Computer Science University of Guelph, Guelph, Canada crasmuss@uoguelph.ca "Empowering Users through Privacy Management Recommender Systems"RozitaDara, IEEE School of Computer Science University of Guelph, Guelph, Canada drozita@uoguelph.ca2014 IEEE Canada International Humanitarian Technology Conference - (IHTC) 978-1-4799-3996-1/14/$31.00 ©2014 IEEE*

xi. *L. Geng and H. J. Hamilton, "Interestingness measures for datamining: A survey," ACM Comput. Surv., vol. 38, no. 3, p. 9, 2006.*