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NEW CLASSIFICATION AND FILTERING TECHNIQUE FOR SPAM MESSAGE OF ONLINE SOCIAL NETWORK (OSN)

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Abstract: *Now a days we are going to update our status regularly on the social network sites like twitter, Facebook, etc. We can chat with our friends through these sites. The important problem of today's OSN is that it could not provide to the user to restrict the some messages, link, and images from the user. And also by using today's OSN sites we cannot control the unwanted messages. So in this paper we provide a way to user can restrict the messages, image, link which are unwanted are posted by their friends on the wall. We are going to use here flexible rule based system, that grant users to customize their filtering criteria to be applied to their walls and using a Link Guard Algorithm, OCR model for image filtering with algorithm.*

Keywords*: Filtered Wall, Online Social Networks, Short text classifier, Machine Learning*

1. INTRODUCTION

Social Networks are one of the famous interactive medium for users to share, disseminate and communicate human life information. Continuous and daily communications imply the sharing of many types of content, including free text, audio images and video files. The Facebook have stated that statistics the common user creates 90 pieces of content per each month, whereas more than 30 billion pieces of content (notes, web links, photo albums, blog posts, news stories, etc.) are shared per each month.

2. PROPOSED SYSTEM

The purpose of proposed system is to provide users a filtering mechanism to escape their walls overwhelmed by useless data. Due to the fact that in FACEBOOKs there is the possibility of posting or commenting other posts on distinct public/private areas. due message filtering the users has ability to automatically control the messages, links and images written on their own walls, by blocking unwanted messages. We have invented the system to filter unwanted messages, from user wall. The images on the FACEBOOK wall which may contain very important information hidden in it, which leads to radical activities. For filtering the images we provide a OCR mechanism.

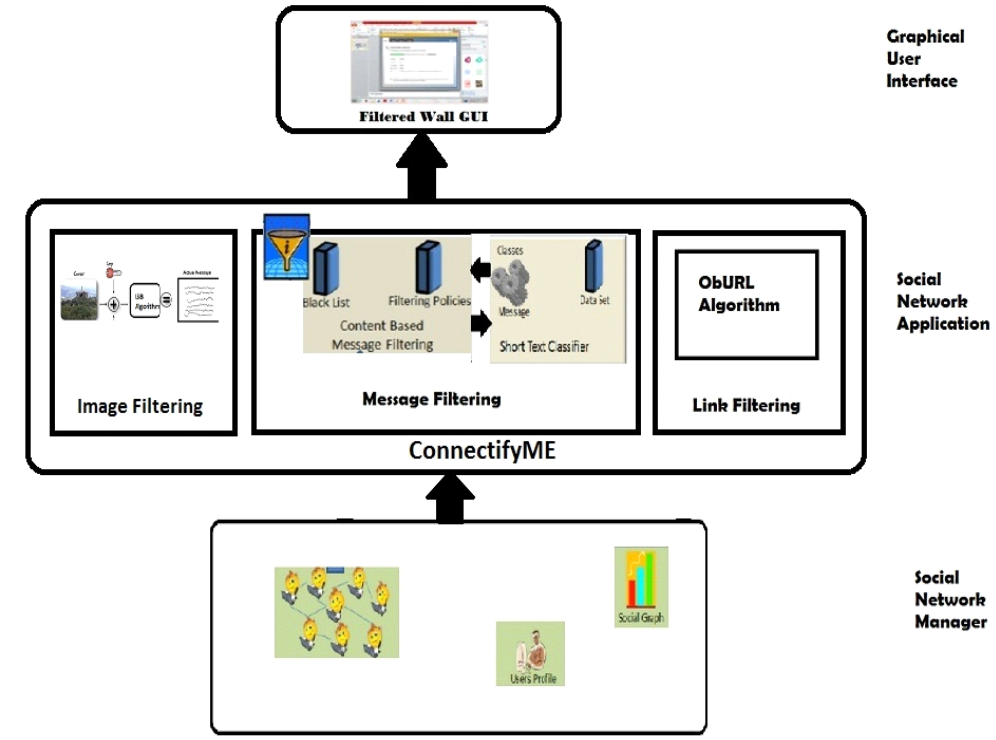

Fig1.architecture of OSN

2.1 Social Network Manager (SNM)

The basic layer is Social Network Manager Layer that provides the essential FACEBOOK function (i.e., profile and relationship administration).It also maintains all the data related to the user profile. After managing and administrating all users data will provide for second layer for applying Filtering Patterns (FPs) and Black lists (BL).

2.2 Social Network Application (SNA)

In second layer is Content Based Message filtering and Short Text Classifier is composed. Also we are identifying phishing links and filtering images posted on user walls in this layer. This is very vital layer for the message, images and link categorization. Also Black list is

maintained for the user who sends again and again bad words in message. Links are filtered and the user the alerted if phishing link detected. The images are scanned and if found the hidden messages are displayed.

2.3 Graphical User Interface (GUI)

The third layer provides GUI to the user who wants to send his messages as a input and filtered wall is provided. In this layer FR (Filtering Rules) are used to block the unwanted messages and provide Black list for the user that are prevented to publish messages on user's wall.

In this block diagram we are demonstrating the overall flow of the project implementation idea. Sender is the one who post messages/links or both on the user wall, for that sender should be friend of user. Before posting the post on the user wall, system will check if user is blocked user or not. If it is the blocked user then the messages, image or links will be discarded and would not reach to the user wall, if it is not a blocked user, the filtering criteria will be applied on the message, images or links.

3. PROPOSED WORK

1.1 Facebook Wall

Online Social Network is the application associated with the email address of the user. It contains no of functionality of chatting, posting messages, update status, adding friends and many more. Some of the examples are Facebook wall, Twitter etc.

3.2 Message Filtering

In [4] Marco Vanetti, Elisabetta Binaghi, Elena Ferrari have said that When a message is delivered to a local user of Mail Server, it is stored in the INBOX folder. In Web Mail, each user can define a set of actions to be performed on all new incoming messages, as well as their conditions. These activities are called filters and are specified through filtering rules. The filtering mean not only refusing messages or separate them to folders, but it includes actions as automatic replies, notifications, forwarding the message to a different email address, etc.

3.3 Phishing

To study we refer the paper of Juan Chen and Chuanxiong Guo have presented [5] The term phishing is general term for the creation and use by criminals of emails and websites designed to look like they come from real, well-known and trusted businesses, financial institutions and government agencies–in an attempt to collect personal, financial sensitive information.

4. COMPARISION

The existing system is similar to the face book there is no phishing link and image filtering on OSN wall. To overcome that we proposed our system we use different algorithms for message filtering, link phishing and image filtering. In existing system there is no any method for message filtering, link phishing and image filtering. By using this system user block the unwanted messages. User can identify the link phishing and user can also filter the images.

5. ALGORITHM

5.1 Link Guard Algorithm

1. Get the link for verification.
2. Extract the hypertext and anchor text. Compare that both are match or not if not then inform the user.
3. If the link contains any input address, then check the lists. Then alert the user as per match or not.
4. If the link is encoded one, then the Link detection algorithm will detect it, decode it and then will inform the user.
5. If the link is shortened then inform the user. Check the domain name of URL in White list and Blacklist and then alert the user respectively.

5.2 Message Filtering Algorithm:

Input – (A, M, U, FP)

Output – (MT, BL)

Where A- System User

U – User posting message on A

M- Message posted on user wall A by U

FP – List of filter patterns of user A

MT – Message Type i.e. good or unwanted

BS - Blacklist

SentenceList () ← SentenceTokeniser (StopWordRemoval (M))

For each sentence in SentenceList ()

{ Int poscount=0, negcount=0;

For each filterpattern in FP {

If (sentence.contains (filterpattern))

SetmessageType (“Unwanted”);

```
                Negcount++;
        Else
                SetmessageType (“Good”);
                Poscount++;
        }
}
If (poscount > negcount) {
        AddToBlackList (M)
}
```

5.3 Phish Link Algorithm

1. Get the link for verification.
2. Extract the Visual Link and Actual Link. Compare that both are match or not if not then inform the user.
3. If the link contains any input address, then check the lists. Then alert the user as per match or not
4. If the link is shortened then inform the user.
5. Check the domain name of URL in Whitelist and Blacklist and then alert the user respectively.

6. RESULT

- **Home Page:** In this page show the new user register and already register users directly log in here.
- **User Account log in:** This page is user account log in user has to post the status, find friends, chatting, view friend request, send friend request.
- **Filter Criterion:** This page is filter criterion this page show the message filter and to add you are friends black list. Enter pattern and to no of days black listed. This criterion is for message filtering.
- **Phishing Link:** If any link is on the user wall to be post then check it to the white list and black list. If link is in white list then user is safe otherwise display message as ‘this link is not safe……. Carefully’.

7. CONCLUSION & FUTURE SCOPE

We implemented a system that filters unwanted messages, and links from facebook walls. We do consider that such a tool should propose expectation assessment based on users procedures, performances, and reputation in facebook, which might involve enhancing facebook with assessment methods. This tool helps in identifying hidden messages and displaying them. Though, the propose of these assessment based tools is difficult by several concerns, like the suggestions an assessment system might have on users’ confidentiality

and/or the restrictions on what it is possible to audit in present facebook. However, we would like to remark that the system implemented represents just the core set of functionalities needed to provide a tool for facebook message, image and link filtering. Thus, we provide a device that helps in reliable, efficient and secure use of facebook.

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