

## A WEB-BASED APPLICATION FOR FILTERING OSN USER WALL

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### Abstract

Social networking sites are very popular. It has become a routine for individuals to keep checking messages on their online social wall. Social Networking sites are best entertainment for youngsters. Online social network helps you to connect with your family, friends, society to share your views and ideas on any topic. As social networking sites are open for all, anyone can post message on their own wall or others wall. Sometime people posts inappropriate messages on other's wall which annoys people viewing them. Considering this problem our paper work is for filtering OSN wall messages before they reach to the users wall and determine trust related to people on OSN. As OSN messages are short for that we used Short text classification method with trust calculation.

### Keywords

OSN :Online Social Networks  
 API :Application Programming Interface  
 OSA :Online Setup Assistant  
 CBMF :Content-Based Messages Filtering  
 STC :Short text categorization  
 SNM :Social Network Manager  
 SNA :Social Network Applications  
 GUI :Graphical User Interfaces  
 FW :Filtering Wall  
 FR :Filtering Rules  
 RF :Relative Frequency  
 BL :Black List  
 RBFN :Radial Basis Function Network

### Introduction

A social networking service or website is a platform to interact among the peoples, for example, The people can shares their ideas, messages, posts, interests, activities

worldwide network. A social network service includes the representation of each user and his/her profiles, his/her active participation on a social platforms, Chats, Gossip, Stories, Advertisements, Audios, Videos and a different types of web services. Social networking sites share a variety of technical features that allow individuals or the users to: built a public profile can also keep some contents of profile private visible to selected friends, make a list of other users who share a connection and can see their list of connections within the system. Basically these visible profiles contains a list of "friends" those are also users of that site. A profile is generated from obtaining answers of many common and personal intrests questions, such as age, location, interests, etc. Many sites allow users to upload images or pictures, and can also add multimedia content to modify the veiw of the profile. e.g., Facebook, allow users to improve their profile by providing facility to insert, update, delete or add their personal information. Many social networking sites allows the users to post their status or blogs, posts or messages, search for other peoples with similar interests, Preferences stated while creating public profile and share contacts. Generally User profiles consist an area to comments or to like to friends messages ,blogs, posts and other users. The content that present in social network is constituted by short text, and the notable example is the messages written by Online Social Network users on specific private or public areas, known as general walls. Social networks have control that allow users to choose or to mention who can view their profile contact them, include them to the list of contacts, and so on, all these will be done to protect user's privacy. In social network there may be a possibility that someone is posting some unwanted messages on other user's space. Some of the social networking sites provides a very little support to prevent spam in messages on user walls. For e.g. Sites like

Google+, Facebook, Twitter allows the user to choose the circle that is allowed to post messages on their walls (i.e. Friends, Friends of Friends, and any predefined group), but no content based filtering or user preferences are given into support to the existing systems, which doesn't prevent undesired and spam messages like political statements, advertisements, Vulgar messages. So it has needed to avoid the displaying of unwanted words on user's wall. This is achieved by using Rule Based Filtering System. Sum up of work as follows:

- We propose automatically filter post messages in OSN.
- We Propose a rule based Filtering Methods allows users to customize filter by applying filtering criteria.
- We propose and experimentally evaluate an automated system, called Filtered Wall (FW).
- We propose to filter unwanted messages from OSN user space.
- We propose to exploit Machine Learning (ML) text categorization techniques assign with each short text message a set of categories based on its content.

## Related Work

Ms. Shruti C. Belsare, Prof. R.R. Keole, OSN user filtered walls for unwanted messages using content mining [13], march-2014, proposed a system that will automatically filter unwanted messages from OSN user walls on the basis of both message content and message creator relationships, their preferences and characteristics. The limitation of this paper is that the users will have no privilege to access or modify the FR specification.

Dipali D. Vidhate, Ajay P. Thakare, to avoid unwanted messages from osn user wall: content based filtering approach [14], april 2014, concerns about both the rule layer and the classification module. The limitation of this paper is the analysis of related work has highlighted the lack of a publicly available benchmark for comparing different approaches to content based classification of user walls short texts.

R. J. Mooney and L. Roy, Content-based book recommending using learning for text

categorization, [6], 2000, uses Collaborative filtering method, but in the proposed system content based recommendation is used. It explains a content based book recommending system that develops information extraction and machine learning algorithm for text categorization.

M. Vanetti, E. Binaghi, B. Carminati, M. Carullo, and E. Ferrari, Content-based filtering in on-line social networks, [7], 2010, Quality of classification is considered as the main aim. This system can usually take decision about the messages which is blocked, due to the tolerance depends on statistical data.

F. Sebastiani, Machine learning in automated text categorization, [8], 2002, Efficiency is good, labour power will be saved is the advantage of this paper. The main approach used here is text categorization. Comparison will be performed between human expert and labour power expert.

H. Schutze, D. A. Hull, and J. O. Pedersen, A comparison of classifiers and document representations for the routing problem, [12], 1995, Latent semantics indexing and feature selection used as an approach comparison of this approaches will be done. Better performance will be taken.

R. E. Schapire and Y. Singer, Boostexter: a boosting based system for text categorization, [11], 2000, Consist of two extensions, specially planned for Multi-class, multi labelled data. In first extension, learned classifier is evaluated to predict a good approximation of sets.

A. Adomavicius, G. and Tuzhilin, Toward the next generation of recommender systems: A survey of the state-of-the-art and possible extensions, [9], 2005, Recommender system's Overview is explained. Main three approach used in present generation of recommendation system is hybrid, content based and collaborative recommendation. Many restrictions of this system are elucidated. But argue to enlarge the advance system of recommender. So that, this system can be used in wide variety. Extensions embrace sympathetic of users are enhanced, integrating the contextual information in recommendation method, sustain for multi

criteria ranking.

B. Sriram, D. Fuhry, E. Demir, H. Ferhatosmanoglu, and M. Demirbas, Short text classification in twitter to improve information filtering, [1], 2010, In online services like twitter users may grown to be plagued by the rare data. Resolution of this crisis is short text messages classification. To solve this problem, we suggest a small set of domain specific feature is haul out from user profile. This approach successfully classifies the text into generic classes.

V. Bobicev and M. Sokolova, An effective and robust method for short text classification, [10], 2008, Classification of text encloses complex and specific terminology; need the application of learning method. Partial Matching method is applied which condense the text for confining the text feature. Partial matching develops a language model. The output of partial matching compression provides consistent precision of text classification.

J. Golbeck, Combining provenance with trust in social networks for semantic web content filtering, [2], 2006, Social network is the common interest grouping web. To make the trust many explanations are required. Two level approaches are stated to combine annotation, trust and provenance. We state an algorithm for concluding trust relationship with provenance information and trust annotation in web social network. Film trust application is introduced which uses trust to movie rating and ordering the review. We consider film trust give the good output.

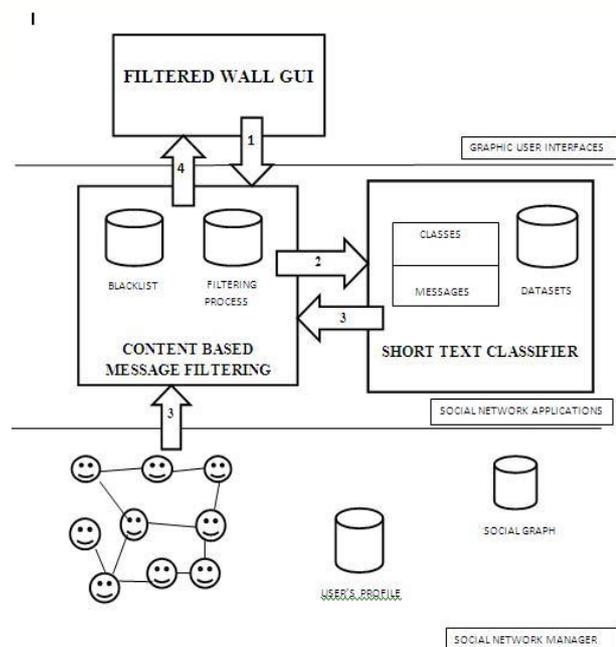
## Problem Definition

The major issue in social network is user does not have a control over their walls because it does not support content based preferences. Therefore it is not possible to prevent undesired messages such as political or vulgar ones which is posted on the private space of the users. Likewise, huge volumes of data are

extracted and posted to the social sites, so it becomes a sophisticated task to social network management.

## Proposed System

We have implemented the system called ConnectifyMe, which contains all the features of Online Social Networking such as Register, Login, Upload Image, Upload post, Friend request etc. In this system we are providing the user with user defined filtering patterns which are given by the user itself to the system and according the user wall is filtered, the sender sending such message are blacklisted automatically by the system and if it exceeds more the three times by the same user he/she is blocked. ConnectifyMe also provides filtering of images which contains hidden text in it, such images are filtered and the text is displayed. The system also provides filtering the phishing links posted on the user walls, alerting the user to proceed or not with the link if found phishing, so to prevent users credentials information from leaking. The aim of the present work is experimentally evaluate an automated system, called ConnectifyMe, able to filter unwanted messages, images and phish links from OSN user walls. Thus we are providing a solution as ConnectifyMe to make the use of OSN wall more efficient, reliable and secure to the user, through which user can have control of what should be displayed on its own wall.



**FIG: FILTERED WALL ARCHITECTURE**

## Stemming and Lemmatizing

The basic function of both the methods—stemming and lemmatizing is similar. Both of them reduce a word variant to its ‘stem’ in stemming and ‘lemma’ in lemmatizing. There is a very subtle difference between both the concepts. In stemming the ‘stem’ is obtained after applying a set of rules but without bothering about the part of speech (POS) or the context of the word occurrence. In contrast, lemmatizing deals with obtaining the ‘lemma’ of a word which involves reducing the word forms to its root form after understanding the POS and the context of the word in the given sentence. In stemming, conversion of morphological forms of a word to its stem is done assuming each one is semantically related. The stem need not be an existing word in the dictionary but all its variants should map to this form after the stemming has been completed. There are two points to be considered while using a stemmer:

- Morphological forms of a word are assumed to have the same base meaning and hence should be mapped to the same stem.
- Words that do not have the same meanings should be kept separate.

For example, the word inflations like gone, goes, going will map to the stem ‘go’. The word ‘went’ will not map to the same stem. However a lemmatizer will map even the word ‘went’ to the lemma ‘go’.

Lemmatizing:

introduction, introducing, introduces –introduce  
gone, going, goes, went –go

## Stopwords Algorithm

Sometimes, some extremely common words which would appear to be of little value in helping select documents matching a user need are excluded from the vocabulary entirely. These words are called *stop words*.

An example of a stop list is as follows:

a an and are as at be by for from  
has he in is it its of on that the  
to was were will with

## Experimental setup

Our system consist of client side and server side web application. We have tested our client side application in windows operating system in chrome browser. For this application we require an modem drivers for an internet connections and for server side application we have taken again windows operating system, JDK1.7 for JAVA platform, Eclipse for JAVA code editing, Wampserver for mysql and Apache Tomcat 7.0.56 for JSP/JAVA servlets.

## Datasets

<http://urbanoalvarez.es/blog/2008/04/04/bad-words-list/>

<http://onlineslangdictionary.com/list/most-vulgar-words/>

<http://www.macmillandictionary.com/theasaurus-category/british/offensive-words-for-people-according-to-nationality-or-ethnicity>

<https://myvocabulary.com/word-list/synonyms-for-dislike-vocabulary/>

## Conclusion

We have proposed a Filter wall to filter unwanted messages from Online Social Network private walls. We have used blacklist management and filtering rule to provide rules to the system. Blacklist rule is used to avoid unwanted messages created by the unauthorized users. So, we can avoid unauthorized person and we can keep our private wall secure. We have also implemented OCR technique in which the text from the images get extracted and the contents will get filtered from the images.

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- [16] <http://onlineslangdictionary.com/lists/most-vulgar-words/>
- [17] <https://myvocabulary.com/word-list/violence-vocabulary/>