



## RESEARCH ARTICLE

### PROTECTING OSN USER WALL FROM UNWANTED MESSAGES AND IMAGES BY FILTERING - A SURVEY

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#### ABSTRACT

Online Social Networking sites (OSNs) inspire the people to come close and increase communication easily. To make communication easily there are various online social sites that are available like Facebook, Twitter etc. which brought world closer. Social networking is one of the fastest media to spread the information. Users has a freedom to share their own emotions in terms of pictures, text etc. To do communication user have to create its account on respective web site then he/she may allow to perform various activities like adding friends, sharing videos and images. Social Networking Sites provides individual and separate space all users to post the status such a space is called Wall. But sometimes people post irrelative messages on a particulars wall which may cause a serious problem to user's reputation. To overcome this challenge some filtering criteria should be used. This paper has surveyed the details of existing filtering techniques.

#### INTRODUCTION

Social Networking has become a popular way for users to meet and interact online. The following some definition has been proposes Schneider *et al.* (Marco Vanetti, 2013), "OSNs form online communities among people with common interests, activities, backgrounds, and/or friendships. Most OSNs are Web-based and allow users to upload profiles (text, images, and videos) and interact with others in numerous ways". Adamic and Adar (Tiantian Zhu *et al.*, 2016), "Social networking services gather information on users' social contacts, construct a large interconnected social network, and reveal to users how they are connected to others in the network". Social network site Boyd and Ellison (Zelikovitz, , 2000). "It defines social network sites as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system". Users spend a significant amount of time on popular social network platform (such as Facebook, MySpace, Twitter etc.) to storing and sharing a wealth of

personal information, events, and different activities. In this OSN one activity that is writing or posting content to other or friends walls. Unfortunately, this activity also attract significant amount of peoples who continuously expose malicious behavior (e.g., post messages containing vulgar contents, bad images, following a larger amount of users, etc.), leading to great misunderstanding and inconvenience on user's social activities. To overcome this issue and protecting user wall from this behavior our system developed a Support Vector Machine of Machine Learning technique. In this system we concentrate on text content, images and text include in image. We implanted text filtering content in two steps : a. In first stage, we categories the messages by using support vector machine. It categorizes messages as Neutral and Non neutral b. in second stage we considered different categories to classifying data non neutral messages are classified depending upon category. Filtering rules apply on rule layer to classify data. This filtering rule nothing but list of categories which content are unwanted to user. According to users requirements filtering criteria's decided. The proposed system provides not only classification and filtering rule but also provide BlackList (BL). BL is list of users that are temporarily prevented to post any kind of messages on user wall. The second part of the designed system is to filter unwanted bad human images from user's wall. We can achieve this filtering by using skin detecting method.

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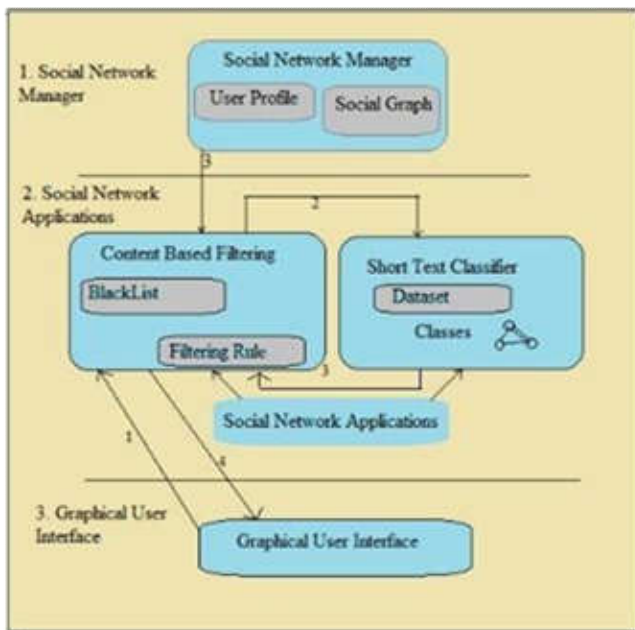


Figure 1. System Design

In Fig 1. Show the system design. Descriptions of different layer are as follows:

**Layer 1 Social Network Manager (SNM):** The profile and relationship management is main task of Social network management layer. It contains the information of user's profiles and provides this information to the second layer for applying filtering rules (FR) and blacklists (BL).

**Layer 2 Social Network Application (SNA):** These second layers apply for filtering purpose. This layer consists Content Base Message Filtering (CBMF) and a short text classifier is most important layer. The classifier classifies each message according to its content and CBMF filters the messages according to filtering rule and blacklist given by the user.

**Layer 3 Graphical User Interface (GUI):** Third layer graphical user interface where user enter his input and wait to see published wall messages.

### Related Work

The content based filtering is an emergent area of research. Many researchers has working on this area.

Macro Vanetti *et al.* (2013), gives the user to have a straight control over their own private divider to stay away from the undesirable messages. The user have a straight control over messages posted all alone private space. So we are utilizing the mechanized framework called Filtered Wall (FW), which have an ability to channel undesirable messages. This framework will pieces just the undesirable messages send by the client. Downside is client won't be blocked; just the substance posted by the client will square substance based message sifting and short content characterization help by this framework. Tiantian Zhu *et al.* (2016), proposed tangram, an OSN spam filtering system that performs online inspection on the stream of user-generated messages. Tangram extracted the templates of spam detected by existing methods and then matching messages against the templates toward the accurate and the fast spam detection. It automatically divided the OSN spam into

segments and uses the segments to construct templates to filter future spam. Nicholas J. Belkin and W. Bruce Croft (2000), has proposed Information filtering systems were designed to classify a stream of dynamically generated information dispatched asynchronously by an information producer and presented to the user those information that were likely to satisfy their requirements. In content-based filtering each user has assumed to operate independently. As in result, a content-based filtering system selected information items based on the correlation between the content of the items and the user preferences as opposed to a collaborative filtering system that has been chosen items based on the correlation between people with similar preferences Zelikovitz and Hirsh (Bobicev, 2008). attempted to improve the classification of short text strings by developed a semi supervised learning strategy based on a combination of labeled training data plus a secondary corpus of unlabeled but related longer documents. This solution is inapplicable in our domain in which short messages are not summary or part of longer semantically related documents. A different approach has been proposed by Bobicev and Sokolova (Sriram, 2010), that circumvent the problem of error-prone feature construction by adopting a statistical learning method that were performed reasonably well without feature engineering. However, this method, named Prediction by partial Mapping, produced a language model that used in probabilistic text classifiers which are hard classifiers in nature and do not easily integrate soft, multi membership paradigm. B. Sriram *et al.* (Golbeck, 2006), 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, suggesting a small set of domain specific feature is haul out from user problem. This approach successfully classifies the text into generic classes. Golbeck and Kuter (Christian Platzer, 2014) proposed an application, called FilmTrust, that exploited OSN trust relationships and provenance information to personalize access to the website. Christian Platzer *et al.* (Thorsten Joachims, 2011), gives skin a trainable tool to automatically detect pornographic content in images with high precision and recall. skin incorporates novel skin detection mechanisms combined with a highly dynamic support vector machine (SVM) to rate unknown, arbitrary images. The detection engine can be trained to target images of specific domains. Thorsten Joachims *et al.* (Dan Claudiu Cires, 2011). To rate unknown arbitrary images by combining skin sheriff novel skin detection mechanism with a support vector machine which is highly dynamic in nature. Trained detection engine used to target images on specific domain. Claudiu *et al.* (Georgios Vamvakas, 2010), has investigated using simple training data pre-processing gave us experts with errors less correlated than those of different nets trained on the same or bootstrapped data. Hence committees that simply average the expert outputs considerably improve recognition rates. Those committee-based classifiers of isolated handwritten characters are the first on par with human performance and can be used as basic building blocks of any OCR system (all our results were achieved by software running on powerful yet cheap gaming cards).

Georgios *et al.* (Li, 2008), has presented a methodology for off-line hand written character recognition. The proposed methodology relies on a new feature extraction technique based on recursive subdivisions of the character image so that the resulting subimages at each iteration have balanced (approximately equal) numbers of foreground pixels, as far as this is possible. Feature extraction is followed by a two-stage

classification scheme based on the level of granularity of the feature extraction method.

both will be utilized for bunching of data. Novel heuristic online record bunching is unsurprising, which is capable in

**Table 1. Review of Existing Algorithms**

Author	Method	Remark
Macro Vanetti <i>et. al.</i>	FilterWall Architecture by using Radial Basis Function Networks (RBFN).	They focus on only filtering text content on OSN.
Tiantian Zhu <i>et.al.</i>	tangram, an OSN spam filtering system that performs online inspection on the stream of user-generated messages.	Authors have focused only Text in OSN.
Nicholas J. Belkin	Information filtering systems	Chose items based on the correlation between people with Similar preferences
Christian Platzer	Skin sheriff	Best skin detection and positioning of skin areas within a picture
Zelikovitz and Hirsh	Semi supervised learning	In this short messages are not summary or part of longer semantically related documents.
Bobicev and Sokolova	Statistical learning	In this not easily integrate soft, Multimembership paradigm
B. Sriram	Short text Message classification	In this create a new problem of the curse of dimensionality
Golbeck and Kuter	FilmTrust Application	They rate the statements to rate the quality of information in the System
Hui Li, FeiCai a Zhifang nd Liao	Hidden Markov Model	Combined probabilistic model and classical content-based filtering recommendation algorithms

Classes with high values in the confusion matrix are merged at a certain level and for each group of merged classes, granularity features from the level that best distinguishes them are employed. Two handwritten character databases (CEDAR and CIL) as well as two handwritten digit databases (MNIST and CEDAR) were used in order to demonstrate the effectiveness of the proposed technique. Author Hui Li, FeiCai and Zhifang Liao (Chau, 2008), have combined probabilistic model and classical content-based filtering recommendation algorithms to propose a new algorithm for recommendation system, using Hidden Markov Model. The basic approach described in this paper is calculating the similarity of user profile and each profile of all the items and recommending item to satisfy user need or tastes.

Michael Chau and Hsinchun Chen (2008) expanded the idea of content based filtering for filtering the web pages. They used the ML paradigm along with Web content analysis and Web structure analysis. L. Roy and R.J.Mooney (Mooney, 2010). utilizes common separating system, however in proposed framework substance based sifting is utilized. It clarifies the substance based book proposal framework that creates data hauling out and machine learning method for content classification. Bobicev and M.Sokolova (Bobicev, 2008), characterization of content put in unpredictable and particular wording; require the application of learning procedure. Fragmentary Matching technique is connected which contract the content for binding the content trademark. Fragmentary matching creates a dialect model. The yield of partial matching pressure gives steady care of content grouping. J. Colbeck (Colbeck, 2010). Social system is the basic focus bunch in system. To make the confidence numerous clarifications are needed. Two level methodologies are expressed to consolidate gleam, expressed to join sparkle, trust and root. Express a calculation for finishing up trust association with inception data and trust gleam in web interpersonal organization. Film trust application is acquainted which uses trust with motion picture positioning and requesting the survey. B. Carminative, M.Vanetti, E.Ferrari, M.Crullo (Vanetti, 2010). The framework can for the most part take choice about the message which is blocked, man to the acknowledgement depends up on factual data. M. Carullo, E. Binaghi, and I. Gallo (Carullo, 2009), bunching of report is useful in numerous field. Two classes of grouping universally useful and content sifting, these

grouping of content separating parallel measures. Presentation measure is carried out in F-measure, and after that it will be partner up with different strategies. Churcharoenkrung, N., Kim, Y.S., Kang, (Churcharoenkrung, 2005), focuses on the development of a maintainable information filtering system. The simple and efficient solution to this problem is to block the Web sites by URL, including IP address. However, it is not efficient for unknown Web sites and it is difficult to obtain complete block list.

### Conclusion and future scope

As increase the number of internet users make the complexity to handle system efficiently. Out of the various issue in this paper we studied the online social network. We surveyed the existing technique with their pros and cons. Definitely the researchers, scientists have a scope to overcome the problems stated in this paper. Someone can solve the image filtering or text filtering issues out of online social network.

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