



A FILTERING SYSTEM FOR UNWANTED MESSAGES FROM OSN USER WALLS USING TEXT CLASSIFICATION

Harsha Talele¹, Prativina Talele²

Abstract

Now a days, rapidly increasing the use of online social networks (OSNs). Through this services user's can communicate and transfer any data. The major disadvantage of these Online Social Networking (OSN) services is the lack of privacy for the user's own private space. We use pattern matching and text classification algorithm for accurate filtering results. We propose a system allowing OSN users to have a direct control on the messages posted on their walls. This is a flexible rule-based system that allows users to customize the filtering process applied to their user's profiles. A machine learning technique automatically labeling messages in support of content-based filtering.

Index Terms: content-based filtering, filtering rule, filtering system, machine learning , online social networks

I. INTRODUCTION

We all are using one or more of the networking site for communication that are available now a day. Online Social Network are today's popular interactive medium to communicate, share and announce a important quantity of users information. We transfer different types of content if including free text, video, audio image data. Therefore in Online Social Networks (OSN) there is possibility of posting unwanted content on particular public/private are called in general walls. In this paper we are mainly focus on the text based messages. OSN provide less amount of security in posting the unwanted messages.

Here we introduce some technique which is helpful for filtering unwanted messages. Those techniques are filtering techniques and Black List techniques. This filtering technique are used to remove unwanted contents by using content

based filtering rules, Machine learning approach, according to user's interest and recommends an item. Recommender systems works like content based filtering, collaborative filtering, policy based filtering. Blacklists are directly managed by system and should be able to determine the users to be inserted in the BL and decide a user's retention in BL is finished. Such information is given to the system through a set of rules called BL rules. Additional contribution is that we used pattern recognition technique.

II. LITERATURE SURVEY

Table I shows the comparison of literature survey:

TABLE I. Comparison of Literature Survey

Authors Name	Title	Year	Technique	Result
Loriene Roy and R.J.Mooney	Content Based Book Recommending Using Learning for Text Categorization[1]	2000	mutual filtering method	A system filter content-based messages from user's walls
B. Carminativ e, M.vanetti, E.ferrari, M.Craull	Content Based Filtering In Social Networking Sites Using Web Application [2]	2006	take decision about the message which is blocked	That messages block system run successfully
Katta Rakesh, Nageswara Rao, Suresh	A System Approach to Avoid Unwanted Messages using Filtering Methods [3]	2009	Content Base Filtering Methods	Avoid Unwanted Messages using Filtering Methods from OSN User Walls
Bodicev and M.Sokolov a	Message Filtering Techniques for On-Line Socialnetworks[3]	2010	Fractional Matching method	They got text classification of message
Mayuri uttarwar, Prof. Yogesh bhute	A Review on Customizable Content-Based Message Filtering from OSN User Wall [4]	2013	Customiza ble content-based Message filtering	filter undesired messages from OSN walls

L. Roy and R.J.Mooney uses mutual filtering method, but in our proposed system content based filtering is used. It explains the content based book proposal system that develops information pulling out and machine learning technique for text categorization.

B. Carminative, M.vanetti, E.ferrari, M.Craull In this the system can generally take decision about the message which is blocked, due to the acceptance depends up on statistical information.

Bodicev and M.Sokolova classification of text put in complex and specific terminology need the application of learning process. Fractional Matching method is applied which shrink the text for confining the text characteristic. Fractional matching develops a language model. The output of fractional matching compression provides consistent care of text classification.

III. ARCHITECTURE

Fig 1 shows the architecture of proposed system. In this architecture following components are included as follows:

1. Content-based filtering
2. Filtered Wall Architecture
3. Short Text Classifier
4. Text Representation

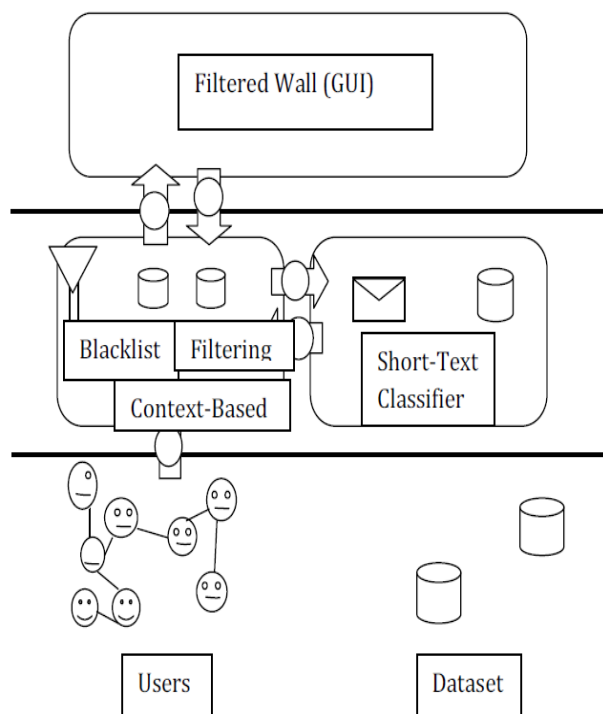


Fig 1. System Architecture

A. Content-based filtering

Documents processed in content-based filtering are mostly textual in nature and this makes content-based filtering close to text classification. Content-based filtering is mainly based on the use of the ML paradigm according to which a classifier is automatically induced by learning from a set of pre-classified examples. A remarkable variety of related work has recently appeared which differ for the adopted feature extraction methods, model learning and collection of samples. The feature extraction procedure maps text into a compact representation of its content and is uniformly applied to training and generalization phases.

B. Filtered Wall Architecture

The architecture in support of OSN services is a three-tier structure. The first layer called Social Network Manager (SNM) commonly aims to provide the basic OSN functionalities (i.e. profile and relationship management) whereas the second layer provides the support for external Social Network Applications (SNAs). The supported SNAs may in turn require an additional layer for their needed Graphical User Interfaces (GUIs). According to this reference architecture the proposed system is placed in the second and third layers. In particular users interact with the system by means of a GUI to set up and manage their FRs/BLs. Moreover the GUI provides users with a FW that is a wall where only messages that are authorized according to their FRs/BLs are published.

C. Short Text Classifier

Established techniques used for text classification work well on datasets with large documents such as newswires corpora but suffer when the documents in the corpus are short. In this context critical aspects are the definition of a set of characterizing and discriminate features allowing the representation of underlying concepts and the collection of a complete and consistent set of supervised examples. Our study is aimed at designing and evaluating various representation techniques in combination with a neural learning strategy to semantically categorize short texts.

D. Text Representation

The extraction of an appropriate set of features by which representing the text of given document is a crucial task strongly affecting the performance of overall classification strategy. Different sets of features for text categorization have been proposed in the literature however the most appropriate feature set and feature representation for short text messages have not yet been sufficiently investigated. Proceeding from these considerations and on the basis of our experience we consider three types of features Bag of Word (BW), Document properties (Dp) and Contextual Features (CF). The first two types of features already used in are endogenous that is they are entirely derived from the information contained within the text of the message.

IV. ALGORITHM

Filtering Algorithm

Step 1 Start

Step 2 A User tries post the message in a wall.

Step 3 Machine learning checks each word of the message using Bayesian technique.

Step 4 If (Words = = Good Words)

Step 5 Message is posted on the wall.

Step 6 Else if (Words = = Bad Words)

Step 7 Reject Bad Words using Blacklist and post the filtered message on the wall.

Step 8 Stop

V. RESULT

Our system will expected to produce output in different forms:

1] Registration

2] Login

3] In Our system following modules are includes.

1) Account Authentication

1. In this module to check the message id and password.

2. If these two fields are valid, the account is authenticated.

3. Otherwise is not valid.

2) Uploading Messages

1. In this module we will check how many Messages a single person is uploading and how many messages are flagged as spam in history.

2. This messages either spam or non-spam.

3. Spam means the more copies of the single message are send.

4. And it contains more than 20 lines.

3) IP Detection

1. In this module to capture the IP address of the system.

2. That system messages are applied to filtering process.

3. In this process, the message content is filtered.

4. Finally to produce the result of filter.

4) CT Detection

1. In this module to set the threshold value Cs .

2. Cs denotes the fixed length of spam Message.

3. Also to count the number of lines in each Message.

4. If the each Message counts are greater than equal to threshold value.

5. So, these messages are spam Message.

5) PT Detection

1) C_a- specifies the minimum number of message that machine must send.

2) P- specifies the maximum spam message percentage of a normal machine.

1. This algorithm is used to compute the count of total messages and the count of spam messages of machine.

2. To check this count of total messages are greater than equal to C_s and the count of spam messages are greater than equal to P.

3. If it's true these messages are spam message.

CONCLUSION

We develop a system which filters unwanted messages from OSN user's wall. In previous system, there are some disadvantages like content-based filtering is not allow and any type (political, bad words) of messages can posted on user's wall now in the current system now we used content-based filtering and ruled based filtering where message posted on wall no matter who post them but in current system. We provide matching of message with database words and block those messages if matching. We also display how much percent message match with database word collection. And also, in this

system we have presented a system to filter undesired messages from OSN walls.

References

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