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Influential Node Tracking for Secure Social Network

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Abstract: Currently Social media sites like Facebook, Twitter are used for spreading the information and influence of particular point. We can get small set of influential people in a social network such that pointing them at initial level. It can be used for increasing the influence but the main problem is that to finding the root. We are going to overcome this problem using one Algorithm called as Greedy algorithm for mining top-K influential nodes. This algorithm is very useful for finding the owner of particular post.
We are facing one another serious problem while using Social Media sites is that there are so many malicious attacks spreading by the hacker and that malicious data are hidden behind some attractive posts. For example posts like what does your name meant or how much luckiest today or post which states the giving you laptops, iphone, smartphone in minimum prize or giving them free samples of the product etc. This type of posts in social network may be harmful to users which has the negative intention of stealing the personal information user. We are trying to solve this problem also using positive and negative reviews of that post. As per the ratio of positive and negative post we will display alert message for new user for malicious post or we can block such type of posts automatically.

Keywords— Social Media, Greedy approach algorithm, Malicious Attack.

INTRODUCTION

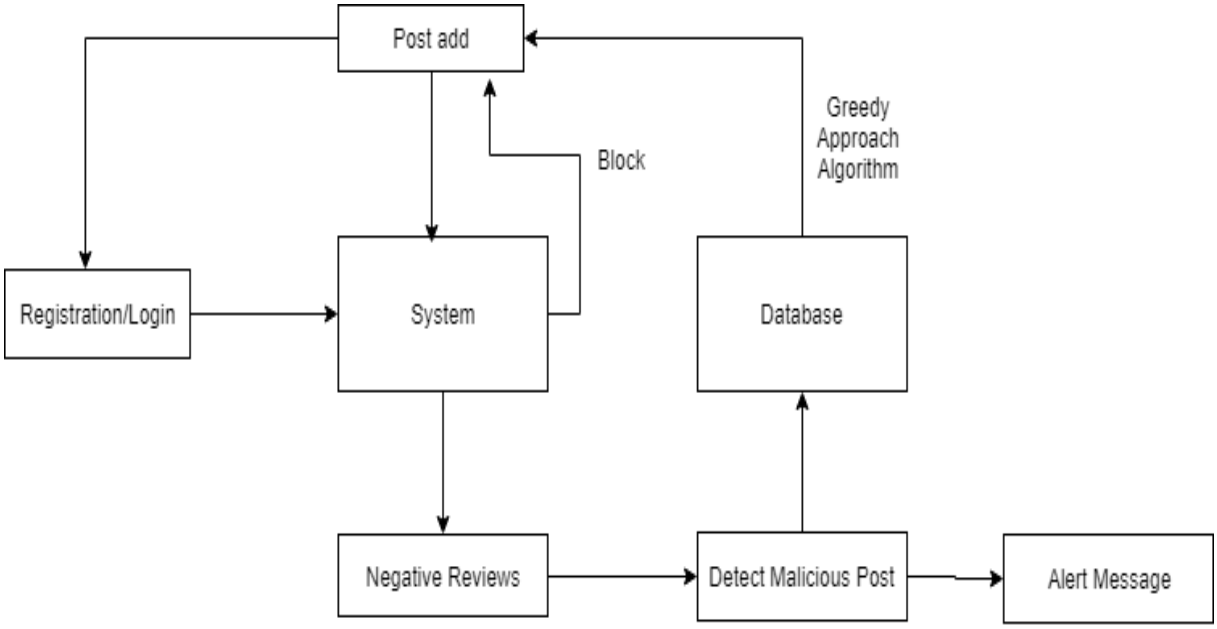
A social network, the graph of relationships and interactions within a group of individuals, plays a fundamental role as a medium for the spread of information, ideas, and influence among its members. Posts for the processes by which influence and ideas spread through a social media have been learn in a number of domains. i.e. viral marketing techniques in the promotion of new products or posts like how much luckiest today or what does your name meant or post which states the giving you ipad in lesser prize or giving them free samples of the product etc. such posts in social network may be harmful to users which has the negative intention of stealing the personal information user. So the takes the advantage of such usage history of ads i.e. rating of such posts the system analyses the that products impact on social media users and predicts the positive or negative category for that posts which is beneficial for future users on social media.

In this work system is going to develop a system of efficient categorization technique for identifying whether a post generated by a third party application is malicious or not. Detecting malicious URLs is now an essential task in network security intelligence. To maintain web security, these types of malicious URLs have to be detected, identified as well as their corresponding links should be found out. The malicious users can upload a content he wants to spread i.e. malicious posts on social media. The content that contains malicious data is posted to other user's wall under a different form. The user mistakes the posts for a real content and clicks the post, which will take him to another page. Thus the malicious user can benefit from this process. In order to get the attention of the user, the malicious user will include keywords or description of pages that will be of interest to the user. These can be adult content or free downloading sites. So it needs a technique which banned such an activity by just identifying and blocking that malicious content directly.

PROPOSED SYSTEM

In proposed work is first of all we are going to developed a Social Media Site such as Facebook. And we will post large number of posts. If there is post which creates violence or post which is harmful (Malicious) the we need to find out owner of that post So, For Finding the Owner of Post or add we are going to use Greedy Approach Algorithm. After that we will Categorized the post by positive and negative post i.e. rating of such posts the system analyses the that products impact on social media users and predicts the positive or negative category for that posts which is beneficial for future users on social media. If there is Large Number of negative Comments for particular Post or add then our system will Identify that post is malicious then our system will generate alert message for that particular post and System will block that post.

SYSTEM ARCHITECTURE



ADVANTAGES OF PROPOSED SYSTEM

- Find the Post Owner on Social Media.
- Identify Malicious Post by Reviews.
- Showing Alert Message for Malicious Post.
- Block Malicious Posts.

MATHEMATICAL MODEL

Let W be the set of whole system which consists of the input, process and output of the system.

W = input, process, output.

Where,
Input = is the set of inputs given to the system to achieve the problem statement.
Process = is the procedure or the algorithm applied to the system which gives the expected output.
Output = is the output of the system.

input = S, U, A, R, P, N, Avg.

Let,

1. S = be the social media system like Facebook.

2. U = be the set of users on social media.
U = u1, u2, u3, ...un.

3. A = be the set of ads or post on social media.
A = a1, a2, a3, ...an.

4. R = ratings given to ad A by user U
R = r1, r2, r3, ...rn.

5. P be the positive category of ads .

6. N be the negative category of ads.

7. Avg is the average calculated by usage history particular ad A

Process:

Step 1: User 'Ui' will registered to 'S'.

Step 2: User 'Ui' will see the post of ads 'Ai' on this timeline.

Step 3: User will give rating 'Ri' (rating are like 1 to 5 points).

Depending on the usage history of particular ad 'Ai' by users system will applythe efficient algorithm to detect the influence and the category of that ad.

Here, the category may be P or N which is calculated by average of particular app being used by users.

Avg = (sum of R) / total number of that ads users.

if Avg is greater than threshold average value then that ad post is considered as positive category else it is negative.

Step 4: As per Negative Rating System will Notify to new user. ie Alert about malicious Post.

Step 5: System will Block that Post.

SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS:

- System Processors : Core2Duo and above
- Speed : 2.4 GHz and above
- Hard Disk : 150 GB and above

SOFTWARE REQUIREMENTS:

- Operating system : 32bit Windows 7 and on words
- Coding Language: : Java J2EE
- IDE : Eclipse keplere
- Database : MYSQL

CONCLUSIONS

In this paper, we have explained how the influence maximization problem in Social Network can be analyzed using simple data taken from Social Network. We are using the greedy approach algorithm method for finding the owner of the Post/add in a social network. This Searching Technique allows to be finding owner of the post/add which are containing malicious data/links. Therefore, the Node which are having malicious content is considered as most harmful node which influences another node in the network. When the malicious node is identified then the next step is finding communication of the node network and how many nodes are influenced by that malicious node. After that we will get reviews of that node and if particular post is very dangerous then we are blocking that post, So we can avoid malicious attacks on another system and Social Media will become Secure.

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