International Journal of Scientific Research & Engineering Trends
Volume 5, Issue 2, Mar-Apr-2019, ISSN (Online): 2395-566X

Fake Review Management

Asst. Prof. B. Ravi Kumar **K. Prabhu** **S. Swarup Teja**
Department of Computer Science and Engineering
Velammal Engineering College
Chennai, TN, India

Abstract - **Today's, everyone is buy a products in online shopping carts without see a product in physically they buy a product based on the reviews of a buyers, but in online shopping carts any one can provide a review about products, it will be the chance for the spammers to provide a spam reviews about the product in online shopping carts the spam reviews are not identified by the buyer's so they think the review is genuine and they buy a product, admin only known that review is not a genuine review, in an existing system admin can find the spam reviews but they can't able to remove the review from the review list, proposed system we can provide a option to remove the spam reviews from the list of review, who will buy the product then they provide review that review is an genuine, one who not buy a product but they provide a review the review will automatically stored in spam review database then admin can remove the review from the list.**

Keywords- **Social media, social network, spammer, spam review, fake review, heterogeneous information networks.**

I. INTRODUCTION

In an online Social Media portals play an major role in information sharing it is an as important source for the producers in their advertising decade as well as used to selecting products and services. In the past years, people hope a lot on the written reviews in their making a decision processes. Positive and negative Reviews are used to encouraging and discouraging them in their selection of products and services.

In addition, written reviews also help service providers to enhance the quality of their products and services. These reviews are one of the important role in success of a business while positive reviews can bring benefits for a company, negative reviews can potentially impact credibility and cause economic losses. The fact that anyone with any identity can leave comments as review, provides a chance to provide a fake review about the product.

II. MATHEMATICAL MODELS FOR THE LOW LEVEL DESIGN

1. User behavioral based features

Spammers usually write their spam reviews in short period of time for two reasons: first, because they want to impact readers and other users, and second because they are temporal users, they have to write as much as reviews they can in short time.

2. User-Linguistic based features

Average Content Similarity, Maximum Content Similarity: Spammers, often write their reviews with same template and they prefer not to waste their time to write an original review. In result, they have similar reviews. Users have close calculated values take same values (in [0; 1].

3. Review-Behavioral based features

3.1 Early Time Frame

Spammers try to write their review's in order to keep their review in the top reviews which other users visit them sooner.

3.2 Rate Deviation using threshold

Spammers, also tend to promote businesses they have contract with, so they rate these businesses with high scores. In result, there is high diversity in their given scores to different businesses which is the reason they have high variance and deviation.

4. Review-Linguistic (RL) based features

Number of first Person Pronouns, Ratio of Exclamation Sentences containing '!': First, studies show that spammers use second personal pronouns much more than first personal pronouns. In addition, spammers put '!' in their sentences as much as they can to increase impression on users and highlight their reviews among other ones. Reviews are close to each other based on their calculated value, take same values (in [0; 1]).

III. DISADVANTAGES OF EXISTING SYSTEM

- There is no information filtering concept in online social network.
- People believe on the reviews to making their decision processes, and the positive and negative reviews are encouraging and discouraging them to selecting a products and services.
- Anyone create registration and gives comments as reviews for spammers to write fake reviews designed to misguiding the user's opinion.
- There is an less accuracy.

© 2019 IJSRET

International Journal of Scientific Research & Engineering Trends
Volume 5, Issue 2, Mar-Apr-2019, ISSN (Online): 2395-566X

IV. PROPOSED SYSTEM

The proposed system is to model a given review dataset as a Heterogeneous Information Network (HIN) and to map the problem of spam detection into a HIN classification problem. In particular, we model review dataset as a HIN in which reviews are connected through different node types (such as features and users). A weighting algorithm is then employed to calculate each feature's importance (or weight). These weights are utilized to calculate the final labels for reviews using both unsupervised and supervised approaches.

Based on our observations, defining two views for features (review-user and behavioral-linguistic), the classified features as review behavioral have more weights and yield better performance on spotting spam reviews in both semi-supervised and unsupervised approaches. The feature weights can be added or removed for labeling and hence time complexity can be scaled for a specific level of accuracy. Categorizing features in four major categories (review-behavioral, user-behavioral, review-linguistic, user linguistic), helps us to understand how much each category of features is contributed to spam detection.

1. Advantages of Proposed System

- To identify a spam and spammers as well as different type of analysis on the topics.
- Written reviews also help service providers to enhance the quality of their products and services.
- To identify the spam user using positive and negative reviews in online social media.
- To display only trusted reviews to the users.

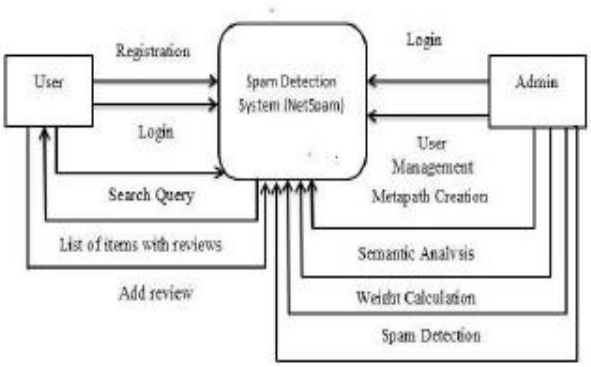

Fig. 1 Architecture Diagram.

V.IMPLEMENTATION CALCULATING MALICIOUS USER

Based on the links shared by different types of user's in social network we will calculate malicious user. Firstly full profile users are given preference and if shared links of specific users is more than threshold value use is considered is malicious user.

1. Incentive Mechanism Design

Admin will block malicious user and give incentives to users who has reported malicious users.

2. Online Social Network System Construction Module

In the first module, we develop the Online Social Networking system module. We build up the system with the feature of Online Social Networking. Where, this module is used for new user registrations and after registrations the users can login with their authentication. Where after the existing users can send messages to privately and publicly, options are built. Users can also share post with others. The user can able to search the other user profiles and public posts. In this module users can also accept and send friend requests. With the basic feature of Online Social Networking System modules is build in the initial module, to prove and evaluate our System features.

3. Normal Full Profile/Partial Profile User Module

3.1 Full Information User

We consider the case where the system Administrator knows the preference of each user. If the system administrator has accumulated enough user's information such as age, personality and hobby for a long time or users in the network are willing to share their preference with the system administrator, the system administrator will have the access to the full information. Without loss of generality, we order user's preferences in the ascending order, i.e., $p1 _ p2 _ _ _ _ _ pN0 _ _ _ _ _ pN$. For $n _ N0$, if $B + pi _ 0$, which means the user himself/herself has motivation to report the malicious user.

3.2 Partial Information User

If the system administrator has not accumulated enough user's information and users in the network are not share their preferences with the system administrator, the system administrator will not able known full information.

3.3 Malicious User

Malicious users perform unnatural activities such as cyber attack or advertisement injection. malicious user's in social networks have a terrible impact on the network. In terms of degrading the network's performance, reducing the network's efficiency, increasing the cost or even disabling the whole network.

4. Crowd Sourcing Module

Crowd sourcing is the detection tasks to the user's, when malicious users perform unnatural activities such as cyber attack or advertisement injection, the users who are the victims of these activities can report them to the system Administrator.

VI. KEY FEATURES OF C#.NET

- C# programs are typically have no need for direct pointer manipulation.
- Automatic memory management through garbage collection

© 2019 IJSRET

- Formal syntactic constructs for classes, interfaces, structures, enumerations, and delegates.
- The ability to build a generic types and generically members. Using the generically, you are able to build very efficient and type-safe code that defines the numerous
- Place holder's specifically at the time you interact with the generically item.
- Support for the anonymous methods, which allow you to supply an inline function anywhere an delegate type is required.

VII. CONCLUSION

This investigation presents spam detection system in particular NetSpam in view of a meta path idea and another graph based strategy to name reviews depending on a rank-based naming methodology. The execution of the proposed structure is assessed by utilizing review datasets. Our perceptions demonstrate that ascertained weights by utilizing this meta path idea can be exceptionally powerful in recognizing spam surveys and prompts a superior execution. Furthermore, we found that even without a prepare set Net Spam can figure the significance of each element and it yields better execution in the highlight's expansion procedure, and performs superior to anything past works, with just few highlights. In addition, in the wake of characterizing four fundamental classifications for highlights our perceptions demonstrate that the review behavioral classification performs superior to anything different classifications, regarding AP, AUC and in the ascertained weights. The outcomes likewise affirm that utilizing diverse supervisions, like the semi-administered strategy, have no detectable impact on deciding the vast majority of the weighted highlights, similarly as in various datasets. Contribution part in this project, for user when searching query, he will get the top-k hotel lists as well as one recommendation hotel by using personalized recommendation algorithm.

REFERENCE

[1] Ch.Xu and J.Zhang. Combating product reviews spam campaigns via multiple heterogeneous pairwise feature's.In SIAM International Conference on Data Mining, 2014.

[2] G. Fei, A.Mukherjee, B.Liu, M. Hsu, and R.Ghosh. Exploiting burstiness in reviews for review spammer detection. In ICWSM, 2013.

[3] A. Minnich, N. Chavoshi, A. Mueen, S. Luan, and M. Faloutsos. True view harnessing the power of a multiple review sites. In ACM WWW, 2015.

[4] B. Vishwanath, M. Ahmad Bashir, M. Crovella, S. Guah, K. P. Gummadi, B. Krishnamurthy, and A. Mislove. Toward's a detecting anomalous user behavior in online social networks. In USENIX, 2014.

[5] H. Li, Z. Chen, B. Liu, X. Wei, and J. Shao. Spotting a fake reviews via collective a PU learning. In ICDM, 2014

© 2019 IJSRET