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Fake Product Review Monitoring and Removal for Genuine Online Product Reviews Using Opinion Mining

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Abstract:-Seller selling products on the web often ask or take reviews from customers about the products that they have purchased. As e-commerce is growing and becoming popular day-by-day, the number of reviews received from customer about the product grows rapidly. For a popular product, the reviews can go upto thousands. This creates difficulty for the potential customer to read them and to make a decision whether to buy or not the product. Problems also arise for the manufacturer of the product to keep track and to manage customer opinions. And also additional difficulties are faced by the manufacturer because many other merchants sites may sell the same product at good ratings and the manufacturer normally produces many kinds of products. In this research, we aim to summarize all the customer reviews of a product and compare the products based on reviews can be done on one place. This summarization task is different from traditional text summarization, because we only mine the information of that product on which the customers have expressed their opinions and whether the opinions are positive or negative. We do not summarize the reviews by selecting a rewrite some of the original comment, from the reviews to capture the main points as in the classic text summarization. Our task is performed in steps: (1)while login the customer will be verified using his/her e-mail id; (2) mining product features that have been commented on by customers; (3) identifying opinion sentences in each review and deciding whether each comment positive or negative; (4)and while giving opinions if its fake then e-mail id is blocked; (5) summarizing the results. This paper proposes several novel techniques to perform these tasks and Our experimental results using reviews of a number of products sold online demonstrate the effectiveness of the techniques.

Keywords:- opinion spam, reviews, fake product, opinion mining, organization .

I. INTRODUCTION

"What other people thoughts are and their thinking" has always been an important source of information for most of us during the decision-making process. Long before awareness of the World Wide Web (www) became widespread, many of us requested our friends to recommend a mixer or to explain who they were thinking to vote for in elections, requested reference letters regarding job applicants from friends, or consulted Consumer Reports to decide what mixer to buy. With the rapid expansion of e-commerce, many products are sold on the Web, and many people are also buying products online. In order to enhance customer satisfaction, requirements and online shopping experience, it has become a common practice for online merchants to enable their customers to suggest opinions on the products that they have purchased. With more and more common users becoming comfortable with the Web, a growing number of people are writing reviews and posting them which are becoming beneficial for others. As a result, the number of reviews that a product receives grows rapidly. Some popular products can get hundreds of reviews at some large merchant sites. And our application will give you the promising reviews by filtering them from other sites. And then you can decide what you want to buy or not.

II. EXISTING SYSTEM

When performing any type of internet shopping, many of the users will spend their quality time into reading other user reviews if they are available. A survey performed by Yelp.com has shown that:

- More than 80% of users and shoppers do check and rely on reviews of the people.
- 50% rely on ratings of the online product they want to buy.
- 30% of the users compare the product's reviews with others product's reviews to get a reliable and trustworthy thing.

Clearly consumers value the feedback given by other users as do the companies that sell such products. Blogs, websites, discussion boards etc. are a repository of customer suggestions which are valuable and important sources of textual data. Therefore, today's individuals and older ones extensively rely on reviews available on line. It means that people make their decisions of whether to purchase the products or not by analyzing and reflecting the existing opinions on those products. The fact that is if the potential customer or users gets a genuine overall impression of a product by

considering the present affect for that product, it is highly probable that he will actually purchase the product. Normally if the percentage of positive and effective opinions is considerable, it is likely that the overall impression will be highly positive. Likewise, if the overall impression is not proper, it is doubtful that they don't buy the product. Now the customers can write any opinion text, this can motivates the individuals, and organizations to give undeserving spam opinions to promote or not to credit some target products, services, organizations, individuals, and even ideas without disclosing their true intentions. These spammed opinion information is called opinion spam.

III. MOTIVATION

The reason behind developing this system is that people are now days heavily rarely on opinions before buying anything. This instigates many peoples to write fraud and useless opinions about other products or service. Even there are some organizations in the market who is are hiring professional to write fake reviews and promote their products or defame its competitors product. This fake opinions are misleads the customers buying experience and convince them to buy products which are based on fake opinions so there is a need to devise a tool which can help them to find the true opinions about products, peoples and services. The proposed system and it will analyze the opinions and classifies them which one spam or non-spam. Approach in research and practice, an information filtering and e-commerce applications. So now a days how to avoid getting scammed?

According to, there are 2–6% fake reviews in Orbitz, Priceline, Expedia, Trip advisor, and so forth. It also reported that Yelp has a fake review rate of 14–20%. Thus, detecting fake online reviews is becoming an important issue to ensure that the online reviews should to be trusted materials of opinions, rather than being swarming with lies.

Researchers have proposed various fake review detection approaches are found in the past few years to preserve the accuracy of online opinion mining [1]. results. One major task in this area is to distinguish between fake reviews and truthful reviews. A variety of methods are available to address this task mainly from two angles: reviewer and review. For example, the works in mainly use content features of reviews to represent reviews for classification tasks. On the other hand, the methods which try to exploit the information of the reviewers will benefit the prediction task. Different from these works, we will examine the effects of product on review features for fake review detection.

IV. SCOPE

Now any people can write any opinion text or review, this can draw the individuals attention, and organizations to give undeserving spam opinions to promote or to discredit some target products. So there is a need to develop an smart system which automatically mine opinions and classify them into spam and non-spam category. Proposed opinion spam analyzer will automatically classify user opinions into spam or non-spam. This automatic system can be useful to business organization as well as to customers. Business organization can monitor their product selling by analyzing and understand what the customers are saying about products. Customers can make decision whether he/she should buy or not buy the products. This can helpful to people to purchase valuable product and spend their money on quality products.

V. CONTRIBUTIONS

The intention of this research is to distinguish the fake opinions posted about products and the genuine one to intentionally change the overall sentiment of the products. The proposed system will save there efforts and time by helping the users and business organizations identify spams from different opinions quickly and also help in purchasing their valuable products from a trustworthy site. In this paper some of the basic terminologies used in Opinion Spam Analysis, verification of emails and throughout this thesis are formally defined, along with a brief summary of some of the classification techniques used in this type of thesis along with a summary of some of the most popular related works.

VI. PROPOSED SYSTEM

As most of the people require review about a product before spending their money on the product. So people come across various reviews in the website but these reviews are genuine or fake is not identified by the user. In some review websites some good reviews are added by the product company people itself in order to make product famous this people belong to Social Media Optimization team. They give good reviews for many different products manufactured by their own firm. User will not be able to find out whether the review is genuine or fake. To find out fake review in the website this "Fake Product Review Monitoring and Removal for Genuine Online Product Reviews Using Opinion Mining" system is introduced. This system will find out fake reviews made by the social media optimization team by identifying the IP address. User will login to the system using his user id and password and will view various products and will give review about the product. And the user will get genuine reviews about product. And while reviewing he needs to enter the email id from which he is reviewing and it would be verified. If he writes a fake review then his id will be blocked bot allowing him to share his opinions again.

System works as follows:-

- Admin will add products to the system.
- User need to enter their email id and OTP no to enter the system
- User once access the system, user can view product and can post review about the product.
- For posting reviews, the user's id will be verified.
- And admin will also block the email id of the user if reviews are spammed.
- Admin will delete the review which is fake.

VII. TECHNICAL FEATURES

- Admin Login: - Admin login to the system using his admin ID and password.
- Add product:- Admin will add product to the system.
- Delete Review:- Admin will remove the review which tracked by the system as fake.
- User Login:- User will login to the system using his user ID and password.
- View product: User will view product.
- Post Review:- User can post review about the product.

VIII. DIAGRAMETRIC ILLUSTRATION

Fig1. Illustration of fake reviews

In this given picture, it is an example in which how the fake reviews are posted and there are 3 ways to identify fake reviews.

1. Reviewer's opinions consistently run counter to the majority.
2. There are common patterns on posted reviews
   When a same user post again and again fake reviews then their a same pattern of that person do.
   There are some software also available which post the fake reviews on different websites so it is very difficult to identify between them but persons uses that also post the reviews with some sort of pattern to identify the reviews we can identify with their pattern easily.
3. Different reviews are posted on same IP address

IX. SOFTWARE REQUIREMENTS

- Windows and above
- My Sql
- JSP

X. HARDWARE REQUIREMENTS

- Processor – i3
- Hard Disk – 5 GB
- Memory – 1GB RAM

XI. ADVANTAGES

- User gets genuine reviews about the product.
- User can post their own review about the product.
- User can spend money on valuable products.

XII. RESULT

Now a days technology is growing day by day and there are so many website and application are available in the online market by which they sell their product and on that products there are millions of reviews available on base of reviews user buy the product most of the time. There are some organization which posting fake reviews on fake product [3].or on genuine product and user gets stuck.

Our application which will help the user to pay for the right product without any getting into any scams. Our application will do analysis[2] and then post the genuine reviews on genuine product. And user can be sure about the products availability on that application and reviews too.

XIII. CONCLUSION AND FUTURE WORK

Finding the opinion spam from huge amount of unstructured data has become an important research problem. Now business organizations, specialists and academics are putting forward their efforts and ideas to find the best system for opinion spam analysis[2]. Although, some of the algorithms have been used in opinion spam analysis gives good results, but still no algorithm can resolve all the challenges and difficulties faced by today's generation. More future work and knowledge is needed on further improving the performance of the opinion spam analysis. There is a huge need in the industry, in day-to-day life for such applications because every company wants to know how consumers really feel about their 665 products and services and those of their competitors by analyzing true reviews not spam reviews. This research proposes an opinion spam analyzer which automatically classifies input text data into either spam or non-spam category. The proposed system will use machine learning supervised technique. The chosen algorithm based on simulation work is Support Vector Machine (SVM). A direction for future research is to implement the system and check performance by applying proposed approach to various benchmark data sets. Comparing performance of different classification methods to find the best one for our proposed opinion spam classification method could be another future research direction. However, there exist other kinds of review or reviewer related features that are likely to make a contribution to the prediction task. In the future we will do further investigate different kinds of features to make more accurate predictions.

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