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Characterizing And Predicting Early Reviewers For Effective Product Marketing On E-Commerce Websites

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Abstract: 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. To find out the review is fake or genuine, system will find out the IP address of the user if the system observes fake review send by the same IP Address many at times it will inform the admin to remove that review from the system. This system uses data mining methodology. This system helps the user to find out correct review of the product.

Keywords: Machine learning, fake reviews, online product, E-commerce, Product review monitoring.

I. INTRODUCTION

One of the fastest-growing places is e-commerce. In general, E-Commerce gives users the ability to write reviews related to your service. Such a diagnosis can be used as a source of information. For example, companies may use it to make design decisions for their products or services. Still, unfortunately, the importance of evaluation is misused by positive events that try to create misconceptions. So,

both to enhance the identity and defame the product. The percentage of their views on the net.

Before buying anything, it is common human behavior to survey this product. Based on the reviews, consumers can browse different brands and finalize the products of their interest. These online reviews can exchange customer feedback about the product. If these criticisms are true, it can help consumers choose the right

product that meets their needs. Conversely, if the feedback is manipulated or incorrect, it can give the user the wrong information. It prompts us to develop a machine that searches for counterfeit products using text and classification items in the review. The value of honesty and misdiagnosis can be measured using data mining strategies.

An algorithm can be used to track consumer reviews through mining themes and online shopper reviews to target emotions and prevent misinterpretations.

Today, the use of the Internet and Internet-based marketing has become widespread. The Internet-based exhibition features many articles and editorials that generate large amounts of data. As a result, finding the best least expensive management or ideal items for the condition is more difficult. Clients only want audits or results based on what can be extracted by others based on their competition. Anyone can write something at this time, improving the number of false audits. Other companies are working on getting people to write fake extraordinary audits on their management or products or write awesome offline surveys on the management or devices of their warring parties. This process offers the wrong partnership for modern consumers who want to buy such things, and so we need such a framework so that such false audits can be isolated and eliminated. At this time, study the method of excavating unusual semi-controlled, unsupported, and guided

statistics to identify fake audits according to different highlights.

II. LITERATURE REVIEW

Opinion Mining by Ontological Spam Detection Duhan and Mittal suggested an article, "Opinion Mining by Ontological Spam Detection," to help us discover. Fake reviews using Naïve Bayes as an algorithm. This device has been introduced as a "Fake Product Review Tracking System" to get fake details inside the website. This device will detect fake reviews by users and block users. To find out if the general description is incorrect or true, we can use some included classes.

If the feedback is from a spammer, then find out the person's IP address to be crossed. If some reviews are from the same IP address, the reviews are considered spam. Account usage is used to evaluate whether reviews are made using the same account.

Finding the most effective brand review, i.e. Reviews are about the best brand or not, not about the product. Therefore, it is no longer useful to remember the brand rate when deciding on a product.

The review recognizes the use of negative vocabulary, i.e., faulty phrases. If there are more than 5 negative words, the diagnosis is spam.

Rajashree S et al. [2014] today, the Internet has become an important component, as it provides more convenience to its users. Many social networking sites give users a percentage of their

views. People care about politics, social issues, and unique products. Today, it is not uncommon for consumers to review online reviews of this product before buying anything. Multiple sites address these reviews. They provide scores for products and show the distinction between unique products. Some companies create false reviews to influence buyers' behavior and increase their revenue. But how to detect these fake reviews is a difficult plan for consumers. In today's competitive world, any agency needs to maintain its popularity in the market. So everyone needs to understand the corporation's opinion and the employer's manipulation. This article explores unique tactics for identifying manipulated feedback and suggests a brand new technique for selecting these manipulative assessments using the Decision Tree (DT).

Jui-Yu et al. [2013] Identifying tampering with reviews has become one of the top research issues in eCommerce as more and more consumers make their purchasing decisions based primarily on personal impressions from digital communities and e-commerce websites. However, clients should not forget that these personal analytics are more reliable than existing pure classified ads. As a result, some companies create fake personal reviews to influence customer behavior and increase their revenue. But, how to detect fraudulent reviews is a difficult task for consumers. Therefore, this study uses the Decision Tree (DT) to improve the class performance of diagnostic manipulation by introducing the eight capabilities of diagnostic manipulation.

Furthermore, we attempt to explore the essential causes of manipulation in identifying criticism using communication assessments and derived technology guides. Finally, a real case of online consumer feedback on smartphones was used to testify to the effectiveness of the proposed procedure.

Benjamin et al. [2007] We deal with the problem of reading some related quotes in the text. For example, such reviews may include food, atmosphere, and service in a restaurant review. We design this project as a two-way scoring issue, which aims to develop a set of numerical scores for each item. We offer an algorithm that mutually learns the character item classification form by modeling dependencies between assigned ranks. This algorithm publishes the predictions of individual classifiers by analyzing meta-family members in all critiques, including contract and comparison. We prove that our agreement-based pairing model is more expressive than role-playing models. Our experimental effects confirm the model's strength: the algorithm provides substantial construction on each rating and a sophisticated pair rating model.

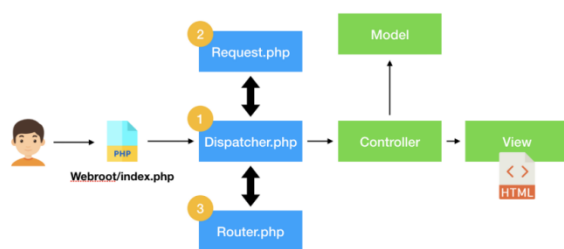
EXISTING SYSTEM

Behavior feature based study focuses on the reviewer that includes characteristics of the person who is giving the review. Addressed the problem of review spammer detection, or finding users who are the source of spam reviews. People who post intentional fake reviews have significantly different behavior

than the normal user. They have identified the following deceptive rating and review behaviors. Deceptive online review detection is generally considered as a classification problem and one popular approach is to use supervised text classification techniques. These techniques are robust if the training is performed using large datasets of labelled instances from both classes, deceptive opinions (positive instances) and truthful opinions (negative examples). Some researchers also used semi-supervised classification techniques.

PROPOSED SYSTEM:

Admin will add products to the system. Admin will delete the review which is fake. User once access the system, user can view product and can post review about the product. System will track the IP address of the user. If the system observes fake review coming from same IP address many a times this IP address will be tracked by the system and will inform the admin to remove this review from the system.



III. METHODOLOGY

Before we look at the data of different device control techniques, let's start by looking at which device is receiving information and which is not. Knowledge of machine acquisition

is often labeled as a subfield of artificial intelligence, but I think categorization can often be misleading at first. The study of system data retrieval evolved from the study in this context. Still, in the information technology software of device data retrieval strategies, it is more beneficial to think of device data retrieval to create model files.

Getting device information involves creating mathematical models to help capture logs. "Learning" comes into play when we provide these tunable parameter models that can be tailored to the given information. In this way, it can understand that the system is learning from the facts. Once these models are healthy for pre-existing data, they can predict and understand new existing data components. I will leave the reader with a more philosophical focus that this version-based approach to "knowing" mathematics is very similar to the "learning" shown by the human brain. Effective use of these tools is important to start with some of the broadest types of processes we will talk about here.

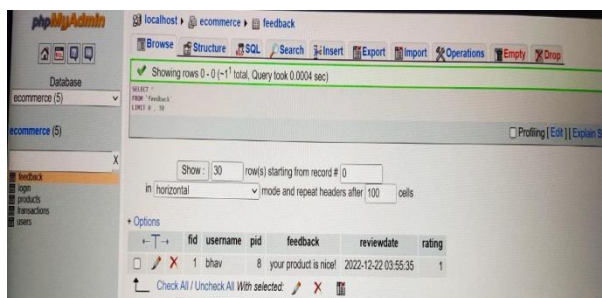
Categories Of Machine Learning :-

To a lesser degree, device knowledge can be categorized into main categories: supervised knowledge and non-supervised learning.

The supervised study involves modeling the relationship between somehow measured factual abilities and a label associated with statistics. Once this model is determined, it can label new and anonymous statistics. It is further divided

into types of barriers and regression barriers: in type, labels are isolated classes, whereas, in regression, labels are continuous parts. We will look at examples of all kinds of supervised knowledge in the next section.

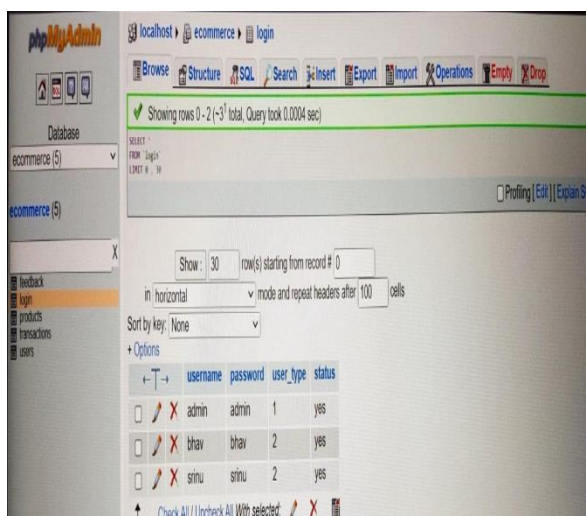
Unsupervised studies include creating unlabeled offset features of datasets and are often defined as "letting the dataset speak for itself." These models include functions such as polling and dimensional discounting. Clustering algorithms become aware of different groups of facts, even more so in the dimension of discounted algorithms looking for more brief representations of statistics. We will look at examples of both types of unsupervised knowledge in the next section.



Showing rows 0-0 (-1) total, Query took 0.0004 sec

fid	username	pid	feedback	reviewdate	rating
1	bhav	8	your product is nice!	2022-12-22 03:55:35	1

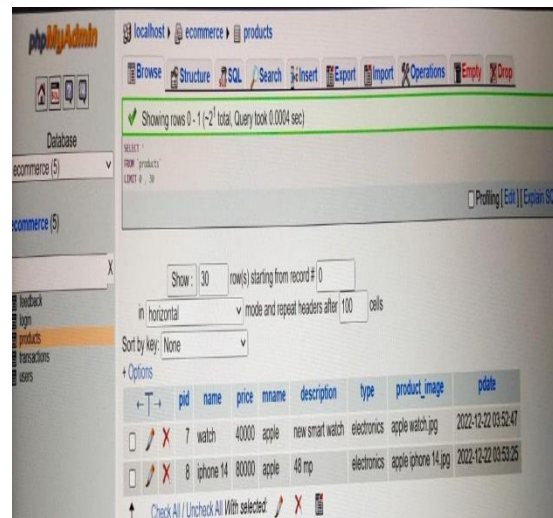
Screenshot.1 Feedback database



Showing rows 0-2 (-3) total, Query took 0.0004 sec

username	password	user	type	status
admin	admin	1	yes	
bhav	bhav	2	yes	
sirnu	sirnu	2	yes	

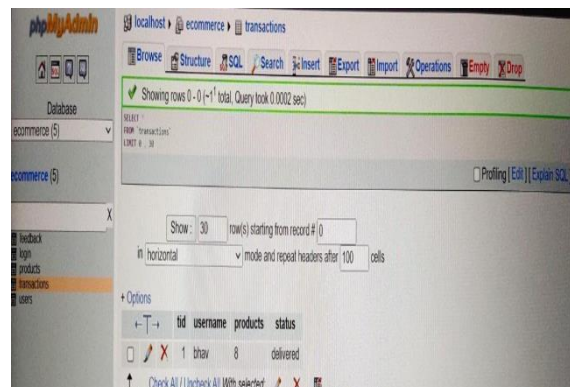
Screenshot.2 Login database



Showing rows 0-1 (-2) total, Query took 0.0004 sec

pid	name	price	mname	description	type	product_image	pidate
7	watch	40000	apple	new smart watch	electronics	apple watch.jpg	2022-12-22 03:52:47
8	iphone 14	80000	apple	48 mp	electronics	apple iphone 14.jpg	2022-12-22 03:53:25

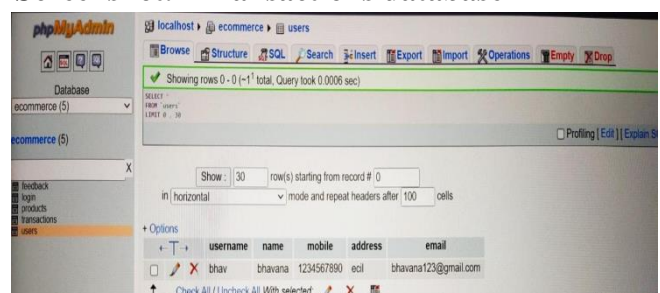
Screenshot.3 Products database



Showing rows 0-0 (-1) total, Query took 0.0002 sec

fid	username	products	status
1	bhav	8	delivered

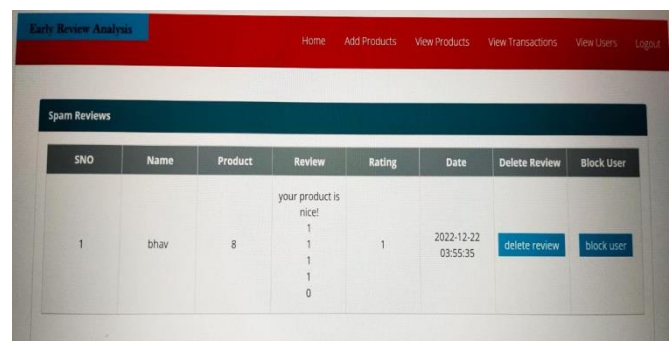
Screenshot.4 Transactions database



Showing rows 0-0 (-1) total, Query took 0.0006 sec

username	name	mobile	address	email
bhav	bhavana	1234567890	ecol	bhavana123@gmail.com

Screenshot.5 Users database



Spam Reviews

SNO	Name	Product	Review	Rating	Date	Delete Review	Block User
1	bhav	8	your product is nice!	1	2022-12-22 03:55:35	delete review	block user

Screenshot.6 Spam Reviews

IV. CONCLUSION

From our work we have come to a conclusion that finding the opinion spam from huge amount of unstructured data has become an important research problem. 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. It is very important to consider certain quality measures like helpfulness, usefulness and utility while analyzing each review. In the literature survey there are many sophisticated methods explained which defines the sentiment analysis with respect to different aspects. Our application which will help the user to pay for the right product without any getting into any scams. Our application will do

analysis and then post the genuine reviews on genuine product. And user can be sure about the products availability on that application and reviews too. In future we would try to improve the method of calculating the sentiment score of the reviews. We would also try to update our dictionary containing sentiment word. We would try to add more words in our dictionary and update the weights given to those words to get more accurate calculated score of the reviews. Sentiment analysis or opinion mining can be applied for any new applications which follow data mining rules. A direction for future research is to implement the system and check performance by applying proposed approach to various benchmark data sets. The main objective

of our work is to create a system which will detect spam and redundant reviews and to filter them so that user correct knowledge about the product. Aim of our project is to enhance customer satisfaction as well as to make online shopping reliable.

FUTURE 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. In future we can make this system to bring down the workload with the increased efficiency and to speed up all activities.

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