

Fake Product Review Monitoring and Removal For E-commerce

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ABSTRACT: In general public require reviews approximately about the product before investing their money onto it. So the users look for various opinions within the internet site however they can't differentiate between genuine or fake reviews. In few websites some of the good reviews are posted by the company members in order to create a false product reviews. Also they used to provide good reviews for the different products designed by their own company. The user will no longer be capable on finding out whether an evaluation is authentic or faux. To discover the fake evaluation in the websites this "Fake Product Review Monitoring and Removal for Genuine Online Product Reviews Using IP Address Tracking" application is delivered. This system will discover fake evaluations made via posting faux feedback approximately a product with the aid of figuring out the IP address along with review posting patterns. The user will be login to the application with the usage of his consumer identification and the password and will be viewing various products and will provide the review about those product. To discover whether a overview is faux or proper, system will be finding out the IP address of a consumer. If a system study faux reviews sent by using the similar IP Address then it will be marked as fake review which will be discarded by the admin from the system. This system allows a consumer to find out the correct assessment of a product.

KEYWORDS: Fake review, Data mining, IP address, Quality product

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I. INTRODUCTION

The volume of data is been increasing each day so we have to handle the enterprise transactions, a scientific statistics, a sensor statistics, pictures, films, etc. We want the system which is capable to extract the essence of information to be present and also which can generate document automatically for higher selection-making. Mining of records is a method of handling expansive records indexes to perceive outlines and installation an association to address issues through information analysis. Data mining is a technique to analyse statistics from an informational series to exchange it into an inexpensive structure for extra usage. It predicts future patterns and also allows the enterprise to make the learning decision. They are carried out in many fields. One such exciting application is faux news research. A faux information is an illegal activity for which a person may be penalized by way of law. Fake information in opposition to a person is referred to as private faux information like murder, robbery, etc. Property faux information refers to the theft of property. Fake news analysis is a law implementation challenge which incorporates an organized analysis that acknowledges and determines the pattern of faux news. Fake information may be categorised into different sorts but, in this, we focused on 4 forms of faux news i.e. Fraud detection, visitors violence, violent faux news, web fake news and sexual offense. The various strategies used for distinctive fake information have been mentioned with an advent to the concerned faux information.

When a faux is observed to be accountable for a particular fake news example, the investigators will be preparing a list of similar faux information by the way of running some of the SQL queries for preceding fake information statistics with the intention to fit instances. The traditional method of faux information matching suffers from a predominant drawbacks:

1. No popular rule for determining the WHERE situation inside the SQL question statement is found, so it is required to carry out the ingesting mission of checking out the multiple queries with an exclusive WHERE clauses.
2. The listing of result lacks sufficient accuracy due to the natural simplicity of the queries.

The main objective of the project is to

1. Identify the fake reviews posted on the online shopping portal using IP address.
2. Removing the identified fake reviews from the portal for trustworthy shopping.

II. SYSTEM IMPLEMENTATION AND MODULE

Administrator Login: The administrator will be entering into the system using their valid ID and password. If any miscalculation is observed in the reviews which are analysed then it can only be handled by the system admin.

Add product: The admin has the access to add the products into the website.

Delete Review: The admin will be removing the opinions posted by the unauthorized users which is tracked by the system as fake.

User Login: Using the user ID and password the user will login to the system.

View product: User can view all the products available on the site.

Post Review: The reviews about the products can be posted by the users.

Monitoring Review: While detecting spams, it is essential to study the behavior of the ratings, there is a threat of spammers spamming the product for no cause, even if there is no issue with product itself, at this factor the overall ratings come to the rescue. Using account that is used to check whether the reviews are accomplished using the identical account.

Ip address detection: The IP address of a person is tracked to identify whether the reviews are from the spammer. If more than one review are from the same IP address then the reviews are considered as spam. Detection of ip address which will assist the admin to test whether the given reviews are from legitimate users or from a spammer. A organization of faux reviewers can be identified using their IP address with, lot of reviews published to the same product are taken into consideration as spam as they will be published on the way to degrade the product sales.

Customers will be able to make selection of whether or not they can purchase the products. This can beneficial to the human beings to get precious product and also spend their money on excellent products.

1. User will be allowed to review only if he is logged into our online portal.
2. After logging in user will be allowed to review for the product.
3. Once the user post their review, then the reviews will be processed and analyzed for spam based on the following conditions:
 - a) Does the review entered by the user contain any link which redirects the user to the other product page for brand promotion?
 - b) Analyzing whether multiple reviews have come from the identical user.
 - c) Analyze whether identical email account or identical IP address are used for multiple reviews on the same product.
 - d) Analyze the ratings or reviews to detect whether the reviews are spam or not.
4. If the review uploaded by the user satisfies any of the above specified conditions then it will be considered as spam or fake reviews.
5. Once the review is detected as spam review or fake review, then user account will be blocked and review will be reported to the administrator.

III. RESEARCH METHODOLOGY

A. EXISTING SYSTEM

Today most of the people spend their time onto the websites of online shopping portals for making some purchases. Before they place any order they go through the reviews that is being posted for that product. According to the survey taken it is shown that nearly 30% of the people examine the reviews of the product with the reviews of the other product in order to acquire a consistent and an honest product. About 50% of the people look upon the rankings of the product they wish to purchase and more than 80% of the people depend on the reviews posted for that particular product before they make a purchase. So it is clear that every person give importance to the reviews posted by each other in the online websites. With the help of those posted reviews they decide whether to place an order or not. A reality is that if the customer or a user's gets the real standard impact of the product through thinking about their present influence of those product, it is high feasible that they are going to truly buy the product. If the general impact is not right, then it might be an unsure one that they won't be purchasing the product. Hence the customers can post several review text which may influence the people and also the agencies in order to offer unworthy spam reviews for selling.

DISADVANTAGES

1. Some of the corporation which post a fake reviews on the fake products or on the authentic products and the consumer will be caught. The current technique fails to do this accurately.
2. Also when an identical user keep on posting the fake reviews again and again then they are the same, the existingsystem can't find it precisely.

B.PROPOSED SYSTEM

As most of the people need an overview of the product before spending their money on that product. Therefore humans encounter diverse opinions inside the website however those evaluations are real or faux is not always diagnosed with the aid of the consumer. They supply top opinions for a plenty of extraordinary products which are manufactured by their personal company. So the person who is reviewing the comments may find it difficult to distinguish between the genuine reviews and the faux reviews. In order to discover faux evaluation inside the portal this system was delivered. This application will discover faux reviews posted through their IP address onto the social media group. The person who is willing to buy a product may enter into the system using their user identification and a valid password and they can view a variety of products available in the portal and also they could post review about that product. As the customers are reviewing they need to provide the e-mail identity from which they are reviewing.

The proposed system will be working as mentioned below:

1. The products will be uploaded into the system only by the administrator.
2. When the person tries to login to the system they need to fill in their valid login credentials.
3. Once the user login is successful they can come across various products available in the portal and also they can posttheir reviews about those products.
4. For posting of reviews, each users identification will be tested.
5. When the posted reviews is found to be a fake one then the administrator will block that particular person so that theycan no longer posts their comments.
6. The admin will be deleting the reviews which are faux.

ADVANTAGES

1. The user can get genuine reviews about the product they wish to purchase.
2. The user can submit their review about the product they have purchased.
3. Also the user can spend their money on the valuable products.

IV. SOFTWARE LANGUAGES

A.JSP-FRONT END

Software program developers will generate the HTML, XML or different types of documents in response to the web client request through Java Server Page. Figure 1 demonstrates the working of JSP. The technology lets in the java code and some pre-defined measures to be embedded into the static content. The tag libraries offer the manner of platform independent for extending the competencies of the server. With the help of JSP compiler the JSP's are compiled into the java servlet.

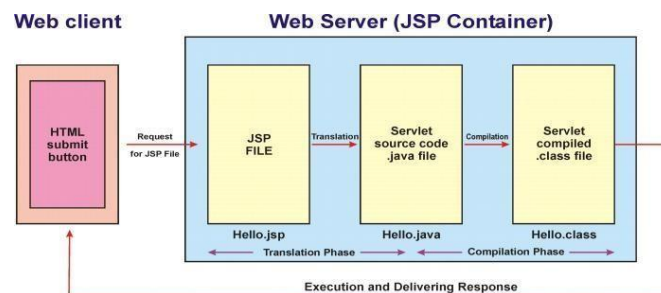


Fig. 1 Working of JSP

B.SERVLETS-FRONT END

Servlets are java technologies solutions to the encoding. These are the programs which may run on the web server and are used to construct the web pages. Figure 2 shows the process flow within a java server page. The purpose of buildingthe web pages is useful for some reasons:

The web page is based on the data submitted by the customer. The result pages from search engines are generated in this way, and the packages that the system orders for the e-trade websites. The information changes regularly. A weather record or the page of news headlines will be used to construct a webpage dynamically returning the previously built side. A web page makes use of statistics from the corporate databases or from other such resources. For instance, we will be using this for making the web page as an online store that will list the current prices and number of items in the stock.

Fig. 2 Architecture of Java Servlet Page

C. MYSQL-BACK END

MySQL Enterprise also provides a complete knowledge base library that consists of loads of technical articles resolving tough issues on famous database topics along with overall performance, replication, and migration. The MySQL AB will develop and supports the own family with excessive performance, low-cost products of database. Figure 4 shows the working of MySql with databases. It is one of the most famous software with the open source database. Most of the biggest and the fastest developing agencies use MySQL for storing the money and powering with their higher quantity websites.

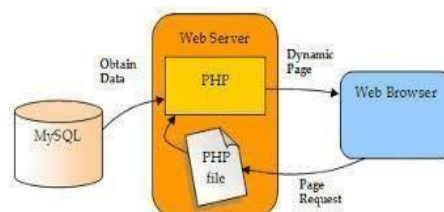


Fig. 3 Working With MySql Database

D. JDBC

The java database connectivity is the framework programming for the developers of java who are scripting the packages that contains the necessary info saved in the spreadsheets or databases and in the flat files. It is generally considered to attach the consumer software into the database of "backstage" of which the database control program software were considered to control the databases. Hence it is said to be a cross platform. The database of any other links of the program is found to be a data source.

II. SYSTEM DESIGN

A. INPUT DESIGN

An input layout is a hyperlink between information machine and the consumer. This incorporates the growing specifications and the approaches for statistics preparation which are necessary to position the transaction facts for processing into the usable form through which the analysing of computer and statistics from the printed and the written report is achieved and it may take place by the means of having human beings keying the facts directly in a system. The layout to enter focuses to control the quantity of the input required, controlling errors, neglecting the delays, neglecting greater steps and preserving the method easy. The input design takes into consideration the following things:

1. The records ought to accept as enter?
2. How the records have to be coded or properly arranged?
3. The process of operating the employee for offering the input manually.
4. The process for creating the validation entry and the steps which is to be followed while the blunders happens.

B. OUTPUT DESIGN

An excellent outcome is the one, which gather the necessities of the user and then provide the data definitely. At the consequences of processing a machine which is communicated to other systems and to the user system through the outcomes received. In this design they decide how to displace the information for immediate purpose and even for the difficult productivity. This is the direct source and the most critical records for the consumers. An efficient output model will improve the efficiency of the devices to facilitate the consumers in making the decisions. Designing the output of the computer ought to be continued in an organized, properly structured manner. The proper outcome should be advanced when ensuring each output element that is designed which may help the clients to discover the machine which may be used without any difficulty with much efficiency.

1. Select the methods for imparting statistics.
2. Create a document, a record or a different codes that may contain records produced by the machine.

V. RESULT AND DISCUSSION

The webpage consists of two parts-User Login and Admin Login. Through user login the user can login to the website through valid login credentials. Once the login is successful they are able to view products, search products, buy products and post their reviews about the products. At the admin side login only admin has the right to enter into this using his/her valid login credentials. They has the access to add new products, view the existing products, view orders being placed by the customers, delete the products, view comments posted by the customer, identify fake reviews and delete the fake reviews from the website.

The Figure 4 displays the homepage of the Fake product review monitoring and removal website.

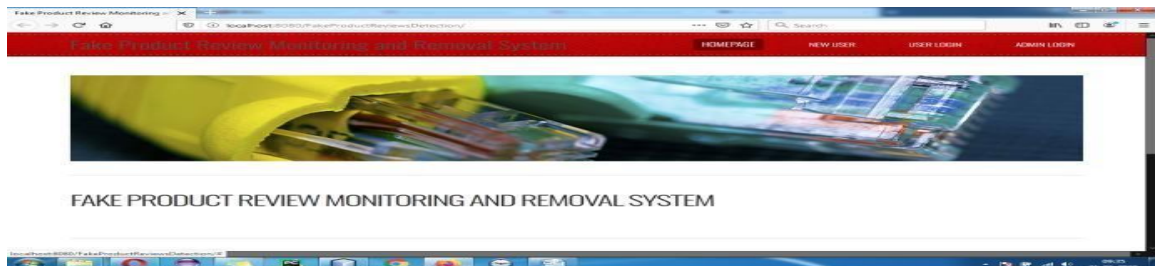


Fig. 4 Homepage

The Figure 5 shows the new user registration page. User registration success message will displayed for valid login details.



Fig. 5 New User Registration

The Figure 6 shows the user login page. The user need to enter their registered username and password to view products.

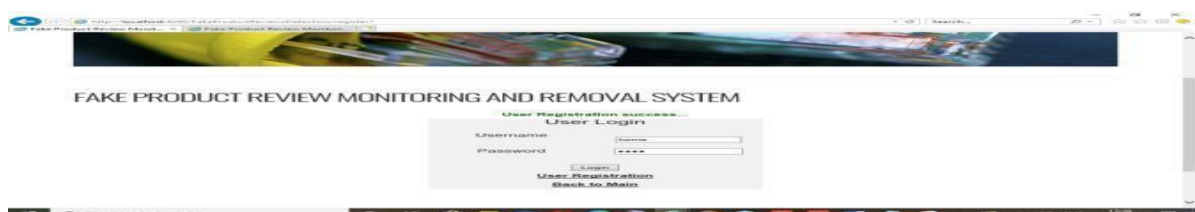


Fig. 6 User Login Page

The user can view all the products that exists in the website by clicking on view product. The Figure 7 displays the details about the product. When the user click a button (view details) the page automatically redirects into the detailed description page of the product.

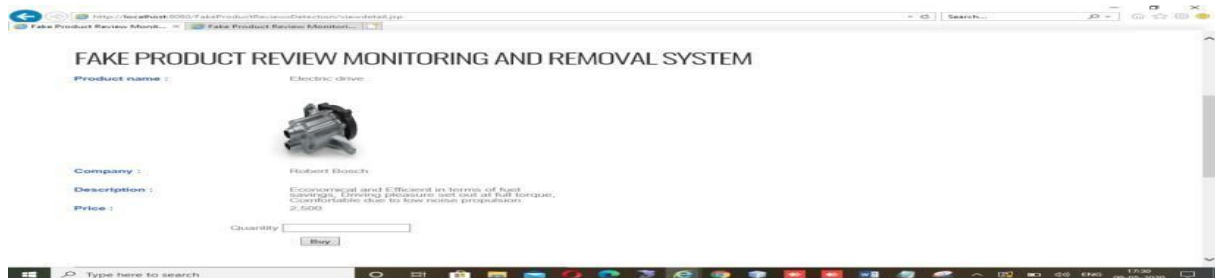


Fig. 7 View Product Details

The Figure 8 displays the features available to post the reviews of the customer by clicking on the submit review button. After the submission a message review comment placed successfully will be popped up.



Fig. 8 Review Submission

The Figure 9 shows the user cart page wherein the customer can choose their mode of pay and place their orders. This image inherits Cash On Delivery mode payment.



Fig. 9 User Cart Page

On clicking cash on delivery mode and giving the required details the order has been placed successfully message will be displayed. The user need to enter their card details in order to place their orders which is been displayed in Figure 10. After this your order has been placed successful message will be popped up.



Fig. 10 Credit Card Details

In the Figure 11 it displays the admin login page. Only admin can login to this page through a valid login details. If the login is successful it will allow to enter into the admin site or else incorrect username or password message will be popped up.

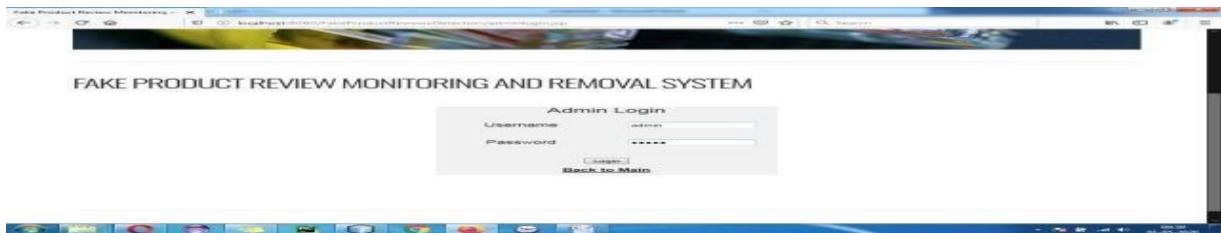


Fig. 11 Admin Login Page

The admin can add a new product in the website portal which is displayed in the Figure 12. Once the products are added the product added successfully message will be displayed.



Fig. 12 Admin Add Product

The admin can view all the products at the view product column. Also the admin can keep track of the orders placed by the customer through view order page which is shown in Figure 13.

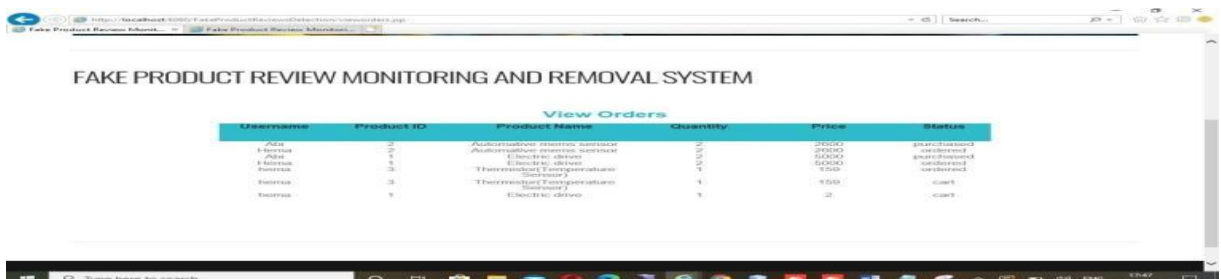


Fig. 13 Admin View Orders Page

If the admin feels insecure about any product in their website then the admin can delete it at the view product column itself. The Figure 14 shows the review page on the admin login page. The admin can view all the reviews posted by the customer.

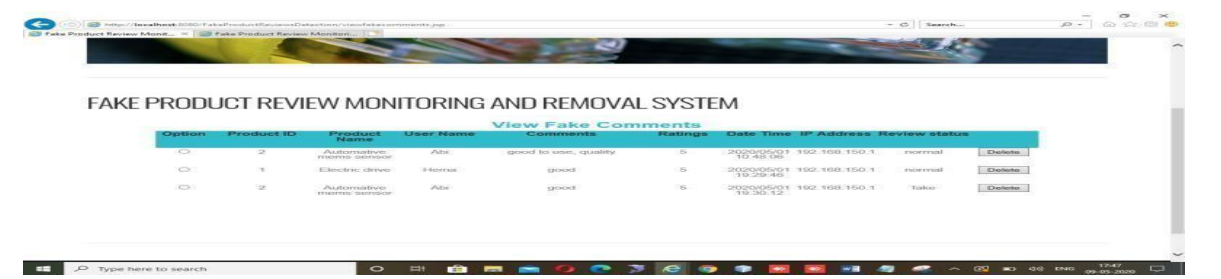


Fig. 14 View Reviews by the Admin

The Figure 15 displays the page where admin can delete the review which is found to be fake .



Fig. 15 Deleting Fake Reviews

Thus fake reviews are successfully removed from the website by the admin.

VI. CONCLUSION

By the usage of this proposed system the people will receive valuable goods from a trustworthy websites. Thus in this project a review is identified to be a fake one through the following steps:

1. Same IP address and Same user 2. Same IP address and Different user.

These details are tracked using their user login credentials. We have designed in such a way that if the admin comes to identify the fake reviews multiple times from the same IP address then the admin can move that IP address into the blocked IP database. This may help the admin to save time. As a future work some additional features can be added into the existing system. In our proposed system the admin can remove the fake reviews from the website only when they login to the website and come across the view review page. In future, we can make the admin to receive a notification about the fake reviews as they were posted on to the websites as to not wait until they view the review page. Also we can test the performance of the proposed system by installing it across various shopping portal. We can get some inputs from the customers through survey or some sort of data collection techniques to make it as a user friendly one.

REFERENCES

- [1] Abbasi, A., & Chen, H. (2008). Writeprints: A stylometric approach to identity-level identification and similarity detection in cyberspace. *ACM Transactions on Information Systems (TOIS)*, 26(2), 1-29.
- [2] Agrawal, R., Imieliński, T., & Swami, A. (1993, June). Mining association rules between sets of items in large databases. In *Proceedings of the 1993 ACM SIGMOD international conference on Management of data* (pp. 207-216).
- [3] Hearst, M. A. (1999, June). Untangling text data mining. In *Proceedings of the 37th annual meeting of the Association for Computational Linguistics on Computational Linguistics* (pp. 3-10). Association for Computational Linguistics.
- [4] Al-Zaidy, R., Fung, B. C., Youssef, A. M., & Fortin, F. (2012). Mining criminal networks from unstructured text documents. *Digital Investigation*, 8(3-4), 147-160.
- [5] Schroeder, J., Xu, J., Chen, H., & Chau, M. (2007). Automated criminal link analysis based on domain knowledge. *Journal of the American society for information science and technology*, 58(6), 842-855.
- [6] Zhang, X., & Ghorbani, A. A. (2020). An overview of online fake news: Characterization, detection, and discussion. *Information Processing & Management*, 57(2), 102025.
- [7] Chen, H., Chung, W., Xu, J. J., Wang, G., Qin, Y., & Chau, M. (2004). Crime data mining: a general framework and some examples. *computer*, 37(4), 50-56.
- [8] Sinha, A., Arora, N., Singh, S., Cheema, M., & Nazir, A. (2018). Fake Product Review Monitoring Using Opinion Mining. *International Journal of Pure and Applied Mathematics*, 119(12), 13203-13209.