

FAKE REVIEW PREVENTION OF A PRODUCT USING A QR CODE

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Abstract

The rapid growth of the Internet influenced many of our daily activities. One of the very rapid growth area is ecommerce. Generally, e-commerce provides facility for customers to write reviews related with its service. The existence of these reviews can be used as a source of information. For example, companies can use it to make design decisions of their products or services, while potential customers can use it to decide either to buy or to use a product. Unfortunately, the importance of the review is misused by certain parties who tried to create fake reviews, both aimed at raising the popularity or to discredit the product. This research aims to detect fake reviews for a product by using the text and rating property from a review. In short, the proposed QR Code system will not save the honesty value of a review, the trustiness value of the reviewers and the reliability value of a product. The honesty value of a review will be measured by scanning the QR code image printed in the product delivery package. Since each product are embedded with individual QR code image, only the real purchased customer can give the feedback will prevent the fake reviews.

Keywords: *Unwanted Comments, Censure, Secured Data, Restricted Words*

INTRODUCTION

In the present scenario, customers are more dependent on making decisions to buy products either on e-commerce sites or offline retail stores. Since these reviews are game changers for success or failure in sales of a product, reviews are being manipulated for positive or negative opinions. Manipulated reviews can also be referred to as fake/fraudulent reviews or opinion spam or untruthful reviews. In today's digital world deceptive opinion spam has become a threat to both customers and companies. Distinguishing these fake reviews is an important and difficult task. These deceptive reviewers are often paid to write these reviews. As a result, it is a herculean task for an ordinary customer to differentiate fraudulent reviews from genuine ones, by looking at each review. There have been serious allegations about multi-national companies that are indulging in defaming competitor's products in the same sector. A recent investigation conducted by Taiwan's Fair Trade Commission revealed that Samsung's Taiwan unit called Open tide had hired people to write online reviews against HTC and recommending Samsung smart phones

LITERATURE SURVEY

S.No	Title	Author Name	Problem Proposed	Description
1	Spam Review Detection Using the Linguistic and Spammer Behavioral Methods	NAVEED HUSSAIN , HAMID TURAB MIRZA , IBRAR HUSSAIN, FAIZA IQBAL , AND IMRAN MEMON	Consequently, manufacturers and sellers are extremely concerned with customer reviews as these have a direct impact on their businesses. Unfortunately, to gain profits or fame, spam reviews are written to promote or demote targeted products or services. This practice is known as review spamming.	Recently, the trend of spam review attacks has increased because anybody can simply write spam reviews and post them online without any constraint. Anyone can hire people to write fake reviews for their products and services, such people are called spammers.

Research Article

S.No	Title	Author Name	Problem Proposed	Description
2	A Survey on Fake Review Detection using Machine Learning Techniques	Nidhi A. Patel, Prof. Rakesh Patel	In this paper we discuss various supervised, unsupervised and semi supervised data mining techniques for fake review detection based on different features.	Sentiment Analysis, Opinion Spam, Fake review detection technique, Machine learning
3	Detection of fake opinions on online products using Decision Tree and Information Gain	Sanjay K.S, Dr.Ajit Danti	In this work the reviews are extracted from the web for a particular product, along with the reviews of several other information related to the reviewers also been extracted to identify the fake reviewers using decision tree classifier and Information Gain .Significance of the features on the decision is validated using information gain.	Entropy, Information Gain, Decision Tree

EXISTING SYSTEM

Initially there was an issue of referring useful review among many. This problem was solved in existing system by means of opinion mining. User has to read all possible reviews for selecting that product. Opinion mining techniques recognizes the polarity of each sentence in all reviews given to product , and then computes the total of all similar products using the standard Function Existing system has provided one feature that anyone can give feedback about any product. This causes limitation for this framework. The person from challenging e-shopping website can give fake feedback to the original website.

Disadvantages

- Classifiers are not available.
- No knowledge about the IP address of spammer registered with an email address and location of the reviewer.

PROPOSED SYSTEM

QR Code is used to prevent fake review. Every product will be packed by tagging QR Code embedded with a secret pin. Review page will be accessed only when the QR Code matches. Then only customer can give a review of the particular product. The Run length code algorithm is used. Run-length coding is applied to accelerate the identification of binary QR code image.

Advantages:

- The credibility of online reviews is preserved.
- The customer can purchase only good products.
- The quality of the product can be improved by honest reviews.

V. MODULE

- User Registration Module
- Searching Products Module
- Shopping Module
- QR Code Generator
- QR Code Scanner
- QR Code Reader
 - Secured Review Module
 - Admin Module
 - Add Product Details
 - Feedback Module

User Registration Module:

In this module new users allowed to register their details. After that the user will get the access permission for estimation system. When users access the application through they log in. The Login Module is that allows users to enter a User Name and Password to log in. This module can be placed on any Module Tab to allow users to login to the application.

Searching Product Module:

SEO campaign aims the correct keywords or search phrases. Aim the wrong search phrase and you could end up with great search engine rankings for keywords that have no search requests. A few hours now spent ensuring that the correct search phrases are aimed can save months of useless optimization.

Shopping:

Customers can search their needs and shop their products by using the advanced search criteria and pay the amount via net banking mode. This module has to maintain the page details and number of pages visited by users. This module is visible by admin. So the admin determine the which pages are mostly used by the users.

QR Code Generator:

QR code (abbreviated from **Quick Response Code**) is the trademark for a type of matrix barcode (or two-dimensional barcode). A barcode is a machine-readable optical label that contains information about the user information to which it is attached. A QR code uses four standardized encoding modes (numeric, alphanumeric, byte / binary, and kanji) to efficiently store data; extensions may also be used

QR Code Reader:

Once the user can added his information in the register form it will also be encoded in QR Code in encrypted form, so that if an intruder tries to change the user information in the QR then the user cannot do that in the QR Code, because the encryption key is unknown to him.

QR Code Scanner:

In this project we can read our QR code by browsing and add QR image into our QR reader. We have alternative QR reading technology by using the scanner. Once we scan the QR and submit it into the QR reader the scanned image will be retrieved and the user can see the information provided in the decrypted QR. After scanned the QR and the information provided in the image will be decrypted.

Secured Review Module :

In this module QR code will be checked whether QR code pattern generated matches or not. If it matches users are allowed to share their reviews for the product in a website. If QR code doesn't match ,review page cannot be accessed thereby fake reviews for a product can be avoided.

Admin Module:

This module control all the other modules and users. Admin have the control to add or remove any end user or organizations .Using this module admin can easily update the new modules.

Add Product Details:

Admin can only add products and maintain the product details. Using this module admin can easily update the new product details.

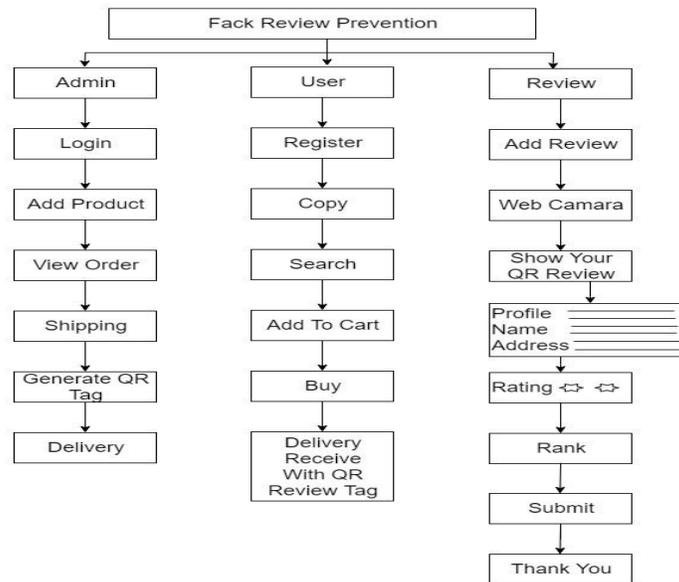


Figure 1. Process of Proposed System

REFERENCES

- [1] D. H. Fusilier, M. M.-Y. Gómez, P. Rosso, and R. G. Cabrera, "Detecting positive and negative deceptive opinions using pu-learning," *Inf. Process. Manage.*, vol. 51, no. 4, pp. 433_443, 2015.
- [2] H. A. Najada and X. Zhu, "ISRD: Spam review detection with imbalanced data distributions," in *Proc. IEEE 15th Int. Conf. Inf. Reuse Integr. (IEEE IRI)*, Aug. 2014, pp. 553_560.
- [3] J. K. Rout, S. Singh, S. K. Jena, and S. Bakshi, "Deceptive review detection using labeled and unlabeled data," *Multimedia Tools Appl.*, vol. 76, no. 3, pp. 3187_3211, Feb. 2017.
- [4] S. Rayana and L. Akoglu, "Collective opinion spam detection: Bridging review networks and metadata," in *Proc. 21th ACM SIGKDD Int. Conf. Knowl. Discovery Data Mining*, Aug. 2015, pp. 985_994.
- [5] A. Mukherjee, B. Liu, and N. Glance, "Spotting fake reviewer groups in consumer reviews," in *Proc. 21st Int. Conf. WorldWideWeb (WWW)*, 2012, pp. 191_200.
- [6] A. Mukherjee, V. Venkataraman, B. Liu, and N. Glance, "What yelp fake review_iter might be doing," in *Proc. Int. AAAI Conf. Web Social Media*, vol. 7, 2013.
- [7] J. K. Rout, A. Dalmia, K.-K. R. Choo, S. Bakshi, and S. K. Jena, "Revisiting semi-supervised learning for online deceptive review detection," *IEEE Access*, vol. 5, pp. 1319_1327, 2017.