

INTERNET TECHNOLOGY AND APPLICATIONS
(CO368)

Fake Product Review Monitoring and Product Evaluation
using Opinion Mining



MID PROGRESS REPORT

Submitted to:

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Introduction

In this fast moving world, most of the people prefer online shopping rather than offline shopping. Before buying the products, people look at the ratings/reviews of products to know whether the product is good or not. 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 to make product famous. These people give good reviews for many products manufactured by their own firm. To find out and remove these fake reviews, this Fake Product Review Monitoring and Removal for Genuine Ratings PHP is introduced. This system will help in removing fake reviews by identifying the IP address of the user. If the review is sent by the same IP address many times, then the system will remove those reviews. This method uses data mining technology. This system also rates the product based on the user reviews. We use a database of sentiment based keywords along with positivity or negativity weight in database and then based on these sentiment keywords mined in user comment is rated. This helps to rate the product automatically using the customer reviews. This method uses the opinion mining technology.

Literature Survey

Systems that are in place at present are capable of filtering out fake reviews and ensuring keeping all reviews legitimate. Also it allows users to rate products after or in other words users evaluate products for them. In addition our system also allows the system administrators to also evaluate products by data mining. This is an extra measure of ensuring that fake ratings are not promoted and customers are not misguided

Sources for fake review monitoring:

- http://ijarcsse.com/Before_August_2017/docs/papers/Volume_7/1_January2017/V7I1-0150.pdf
- <http://ijcsit.com/docs/Volume%206/vol6issue04/ijcsit2015060457.pdf>

Sources for opinion mining:

- <https://pdfs.semanticscholar.org/52f4/827fa75abea76de9917ec4194350e1503694.pdf>
- <http://www.researchpublications.org/IJCSA/NCAICN-13/227.pdf>

Implementation

The system works as follows:

- Admin will add products to the system
- Admin will delete the reviews which are found to be fake
- Users can access the system, view products and can post reviews
- 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.
- The comment of the user is used to rate the product using opinion mining.

The system will consist of two modules:

Admin Module: where admin will login to system, add/remove the products and remove fake reviews

User Module: where user will have to register for the first time. Then the user can login to system, view products and post reviews

Tools used

1. MySQL will be used for the database required for the system.
2. Apache server from XAMPP tool, which has an integrated database is used to create server and maintaining database
3. To create the websites and GUI required, web programming languages HTML, CSS, JavaScript or Bootstrap will be used
4. PHP will be used as the server-side scripting language

Proposed System

The system is composed of a collection of websites that are accessed by external users and some set of websites which are exclusively available only to system administrators. The websites accessed by the users contains various products that are available for purchase, i.e., an online shopping site. This is a common system among any company offering delivery services. Users are prompted to create an account on the site if they wish to purchase any advertised product. Users with registered accounts are allowed to purchase the product and get it delivered to their houses. Upon delivery buyers are sent an email asking for their review of the previously purchased product.

Any user who has purchased the product is allowed to review it. However product manufacturers can take advantage of this fact and can post multiple good reviews of their product in order to promote it and make it popular. The product in reality would actually be very bad. If this continued, a customer could sue the website for false advertising of a product. The administrators comb through the user reviews and search for instances where multiple reviews have been submitted from the same IP address. Also the system will check many reviews posted by users to check intentionally shortening and misspelling words and phrases like “going to” to “gonna”. However a bot wouldn’t make such human shortening and misspelling. This way fake reviews on the website can be monitored.

The administrators also have the option of evaluating products so that the website can sell those products as most popular. This is done through the process of data mining. The user reviews are stored in a database. Using a data mining strategy, the words in the user reviews are compared with words from a database containing a few sentiment words. If the frequency of occurrence of these sentiment words is high for a product, that product can be considered a very useful product which can be advertised as popular too. The sentiment words can include words phrases like “Very good”, “Excellent” and so on which can indicate that the product is very good. This way the website can correctly advertise products that are very useful.

This way the system helps the website be more accurate and also accurately advertise products to users.

Hardware Requirements

- Processor: i3
- Hard Disk: 50GB
- RAM: 1GB

Software Requirements

- Operating System: Windows 7 or higher
- Server: Apache (XAMPP tool)
- Database: MySQL

Work Distribution

Website/GUI (Front end)	Shivananda, Yeshwanth, Suhag
Admin module PHP scripting and database handling	Shivananda
User module PHP scripting	Yeshwanth, Suhag

Work done

- Home page of Online Shopping Website
- Admin Login Page
- User Login Page
- User Registration Page
- Database to store product details and user details

Work to be done

- Linking of websites to the database
- IP address tracking using PHP to remove fake reviews
- Rating the product using Opinion Mining