CHARACTERIZING AND PREDICTING EARLY REVIEWER'S FOR EFFECTIVE PRODUCT MARKETING ON E-COMMERCE WEBSITES

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ABSTRACT

Online reviews have become an important source of information for companies before launching their product. In this paper, we take the initiative to study the behavior characteristics of reviewers through their reviews posted before the launch. An early reviewer tends to assign a higher average rating score before launching their product.The reviews before launch tends to be helpful.

keywords:Ecommerce

I.   INTRODUCTION

The emergence of e-commerce websites has enabled users to publish or share purchase experiences by posting product reviews, which usually contain useful opinions, comments and feedback towards a product. Helpful online reviews might be utilized to make sustainable marketing strategies. It is also valuable for marketers to realize customers' feedback to enhance their products or services. Marketers need to understand how to make use of helpful online reviews to make their businesses stand out from competitors listed online. Product reviews, especially the reviews before launch have a high impact on subsequent product sales. We call the users who posted the reviews before launch as early reviewers. Although early reviewers contribute only a small proportion of reviews as compared to the reviews after launch, their opinions can determine the success or failure of new products and services.These feedbacks can help companies to adjust marketing strategies and improve product designs, which can

eventually lead to the success of their new products. For this reason, early reviewers become the stress to

watch and attract at the first promotion stage of a corporation . Another related program, Amazon
Vine invites the foremost trusted reviewers on Amazon to post opinions about new and
prerelease items to assist their fellow customers make informed purchase decisions.

II.   METHODOLOGY

In the online review portal we have two panels i.e Admin panel and company panel.In Admin panel which will verify the company through register and in company panel they can fill the information and register themselves.   Company also has a login, after registration the company can login from this page using username and password.

Once the company has logged into the portal the company profile appears on the dashboard. From the company profile the company can edit it's details like company name, description, number, address and also add products to its page. In the products section we can see all the products listed by the companies. Each product has a review option which will direct the customer to the review page.

The customer can add review to a product by filling the details like name, contact number, address and can write the review .Once the review is submitted , it will be saved to the company's profile and then the company can access it and sentimental analysis on the reviews to find the area of positive and negative reviews and also modify their products accordingly before the launching of the product.

Figure 1. Entity-Relationship Mode

III. MODELLING AND ANALYSIS

Figure 2. Block diagram of the system
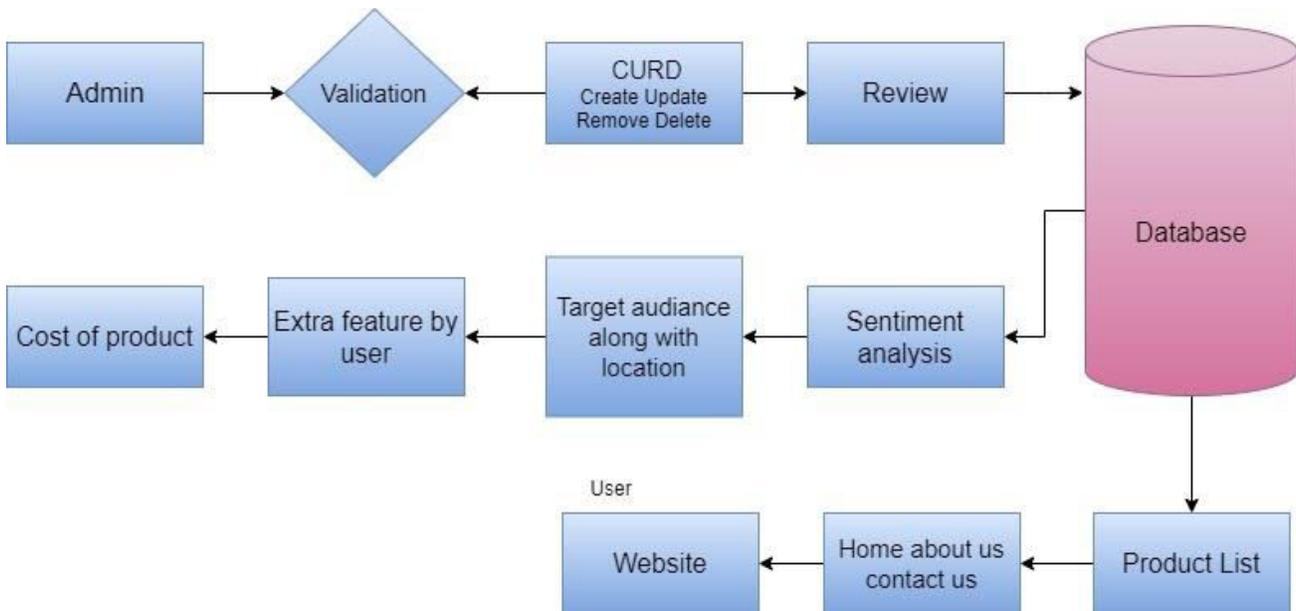
Admin is the one who manages or organizes the portal. Validation is that the process of building documentary evidence demonstrating that procedure is administered in testing then production maintenance .The desired level of compliance of all the stages . Then the CURD stands for Create Update Remove Delete, which creates, adds or deletes the entities. Customers will give reviews on the portal for the products, these reviews will be stored in a database. Database collects and stores the structured information about the products and customers. The reviews are fetched from the database for sentiment analysis. It characterizes the positive and negative reviews given by the customers.With the help of sentiment analysis target audience along with location is tracked and accordingly the product modification may be done by the companies. According to the reviews ,we can add up on the extra features required by the customers and with this cost of the product is decided.
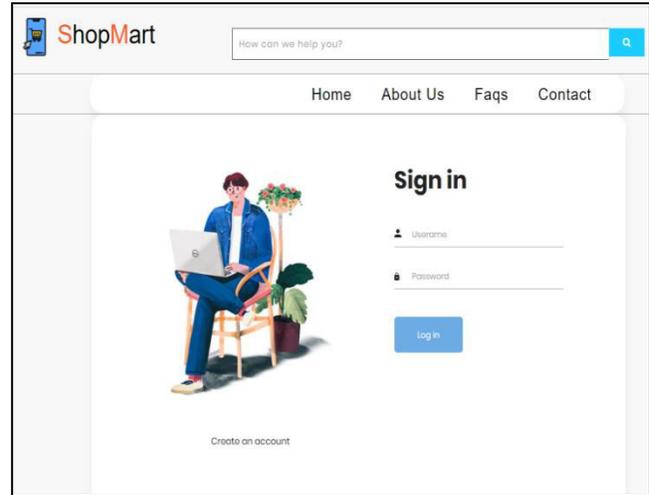
(1)PROCESS FLOW
(A)REGISTRATION AND LOGIN
All the companies that visit our portal have to first register themselves by filling the basic details. The registration is verified by the admin. Once the company is successfully registered then they can move to the login page. After login,the company can further fill their details.

Figure 3. Registration and Login Page

(B)UPLOAD PRODUCT
Uploading the products is done by the company. Authorized companies are uploading the new arrivals to systems that are listed to users. Products are often uploaded with its attributes like brand, color, and every one other details. Companies can add or remove their products and also its specification through our portal.

(C)PRODUCT REVIEW
Once the product is uploaded, customers can now give their independent reviews on the product by filling their details(name, address, contact number etc.) on the review page.
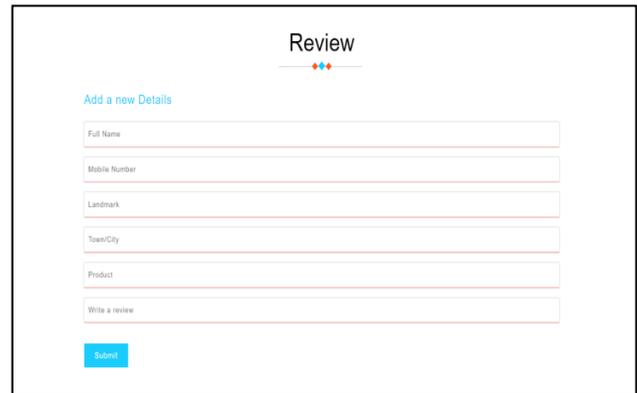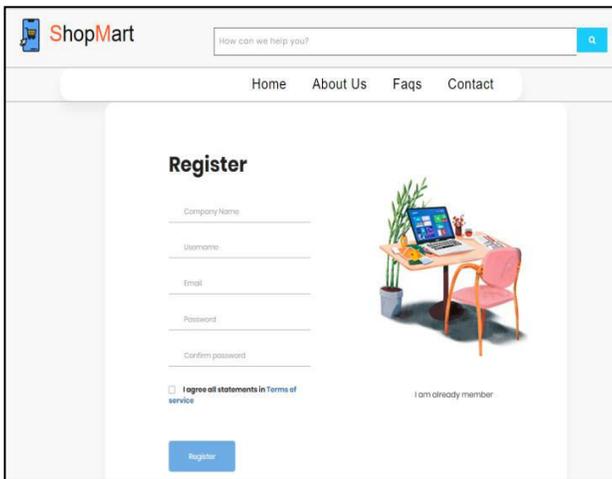

Figure 4. Review Page

(D)ANALYSIS OF REVIEW
The main part of the project is to analyze the reviews that are given by the customers. By applying sentimental analysis on

the data, the data is filtered and then used for planning the future strategies of the company to launch their products.

(2)HARDWARE REQUIREMENT

A desktop/laptop with minimum configuration

- Processor-Pentium(R)1.74GHz
- RAM-1GB
- Hard disk 128GB

(3)SOFTWARE REQUIREMENT

- Browser(chrome/microsoft edge/mozilla firefox)
- Operating System (windows/ linux/ mac os)
- Integrated Development Environment(visual studio code)
- SQLite 3 viewer

(4)TECHNOLOGY USED

(A)BACKEND

PYTHON:

Presence of Third Party Modules. It has extensive support libraries. It is open source and community development. Learning Ease and Support Available. User-friendly Data Structures. Productivity and Speed. Python offers compatibility with various platforms. Python supports procedure-oriented and object-oriented programming. Python puts emphasis on code simplicity and readability instead of flexibility, the language still has it.

DJANGO:

Django is written in Python. The Python language is truly simple to learn. It is easy to set up and run. It provides a simple to use interface for various administrative activities. It allows end-to-end application testing. Allows us to document our API with an HTML output. Offers built-in authentication system. Data modelled with Python classes. It helps us to define patterns for the URLs in your application.

(B)DATABASE

SQLITE3:

SQLite is ultra-lightweight in setup, administration, and required resources. It is an "embedded" database which means it's server-less and can run within our app. The SQLite library is less than 500kb. It stores the database in a single ordinary disk file that can be located anywhere in the directory. The file format used is additionally cross-platform,

so can easily be copied and moved. It is very fast because of its minimal design and simple operations. Installing and running an SQLite DB is pretty easy even for the most novice users. SQLite is a smaller amount of bugs prone instead of custom written file I/O codes.

(C)FRONTEND

HTML/CSS & Java Script:

HTML is supported by all browsers. It can integrate easily with other languages.It displays changes instantly just by saving it and reloading the previous HTML page.

CSS has a Greater consistency in design. It is easier to maintain and update. It uses less coding which will increase page efficiency and decrease the loading time. JavaScript is extremely fast because it are often run immediately within the client-side browser. It plays nicely with other languages and may be utilized in an enormous sort of applications.

IV. RESULTS AND DISCUSSION

In this project, we have successfully implemented the model and collected the reviews from the customers. The reviews as well as the customer details will be used by the company for improving their performance in the market. We will explore effective ways in incorporating review content into our early reviewer prediction model in the future. Machine learning allows software applications to become accurate in predicting outcomes. Further we can work on ways which can give a comparison between similar products by different companies.

V. CONCLUSION

In this project, we have studied that online reviews before the launch of products are beneficial for companies. With these reviews companies can change their marketing strategies or they can do any further modifications needed to make their product gain more value in the market after launch. Currently, we specialise in the analysis and prediction of early reviewers, while there remains a crucial issue to deal with , i.e.how to improve product marketing with the identified early reviewers. We will investigate this task with real e-commerce cases together with e-commerce companies within the future.

continuously supervised our work with utmost care and zeal. He has always guided us in our endeavor to present our project on

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