

Product Review Analysis with Ranking System Based on Transaction Id and OTP

Gayathri H¹ Jayashree K² Ms. Geetha Rani S³

^{1,2}Department of Information Technology

^{1,2,3}Dhanalakshmi College of Engineering, Manimangalam, Tambaram, Chennai

Abstract— This system aims at product ranking by analyzing the reviews. Feedbacks are accepted only from the customers who purchased the products. This will improve the customer trust on feedbacks. SVM is used for analyzing the reviews. The prior research has reported that stability is implemented using iterative smoothing and bootstrap aggregation (bagging) approach. This paper focuses on improving the stability along with the customer trust. Customer trust is the desired property of recommendation system. This is done by authentication of OTP using Random key generation algorithm.

Key words: Reviews, Netflix, OTP, SVM

I. INTRODUCTION

Now-a-days Recommender system plays a major role in suggesting various products to their customers [1]. This can be used in various websites, such as movie ticket booking, ecommerce sites etc. Many ecommerce sites such as flipkart, amazon, eBay all are relayed on user recommendations to suggest products for their users [5]. Recommending a worth product to the users will improve the sales. It uses the feedback provided by the user to the various products they have purchased to form a list of recommended items to the new customers. This helps in providing ratings for the products. The ratings are given as numeric values.

Here, we refer the Netflix recommender system which will use the user's previous ratings to predict user's preferences for the future movies [4]. The new movies with high ratings are first recommended for the users. Consistency is very important characteristic in recommendation system. Previously we use to get advice from online agents, where they will be more inconsistent. This inconsistent reviews will lead to a negative impact on the customers trust. Now-a-days it is replaced by the customer reviews.

When we try to provide both stable and consistent recommender system, we can infer from the previous research that the algorithms that provide consistency in real-time, suffer from instability [2], [3]. But this instability will not lead to reduction of accuracy and vice versa. We refer to a paper that improves stability by using Meta algorithmic approaches such as- bootstrap aggregation and iterative smoothing. This will improve stability in recommendation system.

In our project, we gain customer trust by two means. One is by generating transaction id to the customer who purchases the product only through which they can able to give the feedback. Next we are sending an OTP to the customer's mail id before they submit the feedback. This OTP is provided for protecting transaction id which may be hacked by the hackers. We use SVM to analyze the feedback and for providing rating for the products.

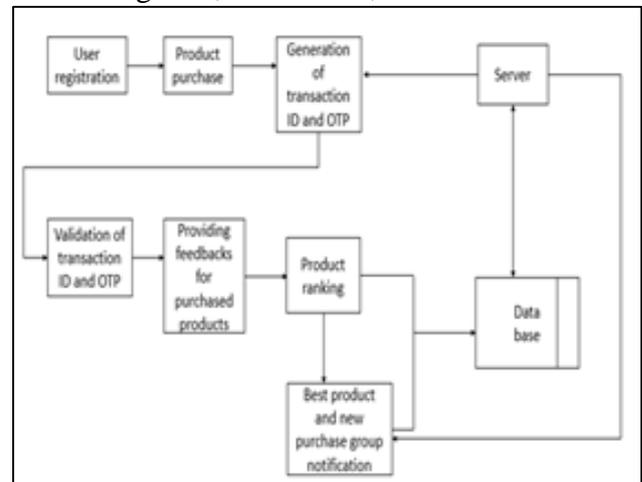


Fig. 1: Architecture diagram

II. METHODOLOGY USED

The main objective of this project is to improve the customer trust in recommender system. Support Vector Machines (SVMs) are a popular machine learning method for classification, regression, and other learning tasks. SVM have been actively in use since the year 2000. SVM in recommender system for product review analysis is used for analyzing the reviews as positive and negative. Based on the analyzed result the product can be ranked. Uses of SVM involves two steps:

- 1) Training a data set to obtain a model.
- 2) Using the model to predict information of a testing data set.

III. EXPERIMENTAL RESULTS AND DISCUSSION

A. User registration

In client side user can enter all details. Then user can login using particular username and password. All the inserted also updated items are added into the product list. Then select user wanted items then add all items into cart products with count of the each item. A warning message will display in dialogue box when the customer type the quantity above the constraint value mentioned in the database. All selected items are displayed in the cart product list. Then purchase the required items.

B. Purchase portal

Consumer buying behavior is the sum total of a consumer's attitudes, preferences, intentions and decisions based on their preferences. The study of consumer behaviour draws upon social science disciplines of sociology, and economics. At this stage, the consumer will make a purchasing decision. The final conclusion may be based on price or availability.

C. Feedback

The process which is used to send the effect of the product is called feedback. Feedback is essential to the working and in all forms of nature, and in man-made systems such as education system, online shopping system and economy. As a two-way flow, feedback is inherent to all interactions. In an e-commerce site, feedback is the information sent to an entity (individual or a group) about its previous actions. This is done to improve the product performance further more. Feedback normally occurs when customers prefer any suggestion in the products. For example, 'customer feedback' is the buyers' reaction to the product they purchased and it is the internally generated information on a firm's performance. Response to a stimuli (such as criticism) is called as the feedback only if it brings about a change in the recipient's behavior.

D. Otp generation and verification

A one-time password (OTP) is a password that is valid for only one login session or transaction. OTP is used for removing the shortcomings that are in correlation with traditional (static) passwords. The most important disadvantages of OTP is that, they are not vulnerable to replay attacks. This means that a customer who tries to record an OTP that was already used to log into a service or performing a transaction will not be able to misuse it, since it will be no longer valid. On the downside, OTPs are not easy to keep in mind. Therefore they require additional technology to work. And verification the code sent to the mobile after that only feedback is accepted.

E. Product ranking

Based on the feedback value we rate the promising items. Then find out the promising items. Candidate item sets can be generated efficiently with only two scans of database. Mining high utility item sets from database refers to the discovery of item sets with high utility like profit. So the user can give the feedback based on the product they purchase, this will be useful for the new user to by the product.

IV. RESULTS

User recommendations are accepted only after successful authentication of the Transaction ID and OTP to the user along with the Product details. We are using SVM for processing the user Feedbacks. This process ensures that only authenticated person can give the recommendations.

V. CONCLUSION

Stability of a recommender system measures the consistency of its predictions. It is an important property of recommendation algorithms, because unstable or inconsistent recommendations could lead to user confusion and reduce trust in recommender systems, which in turn can have negative impact on users' acceptance and harm the success of the system. This paper explores two general-purpose and practical meta-algorithmic approaches—based on the traditional bagging technique and the proposed iterative smoothing technique—that can be used to improve stability of a wide variety of recommendation algorithms. The bagging approach extracts multiple training sub-samples from the original dataset and combine predictions

made based on these samples to form an aggregate final prediction for each unknown rating. The iterative smoothing approach uses multiple iterations to adjust predictions of a recommendation algorithm based on its other predictions in order to make them more consistent with each other.

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