

Building Trustworthiness of User-Feedbacks on Products in Online Shopping Environment

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Abstract: Lack of Trust is the main issue why people fear using E-Commerce for their regular shopping purpose, whereas E-Commerce is very much cost-effective as compared to traditional shopping. But people fear using E-Commerce just because there is no personal contact with the vendor. So it is a biggest challenge to remove this fear from the minds of buyers. The only solution to remove this fear is building Trust in their minds. There are many factors which should be focussed upon while building this trust, they are broadly classified as Knowledge-Based Trust which includes familiarity, reputation, brand, size, website quality, and customer service. We in this thesis have considered reputation as a factor to enhance the website quality. In our implementation we make sure that users give genuine feedbacks on the products. We use the concept of Sentiment Analysis to know the sentiment behind the given semantic feedback and check its concordance with rating given by the same user. If concordance is satisfactory user has to like or dislike five prefabricated feedbacks. Using both the concordance and like- dislike results, Trust Degree of the user is calculated. If the Trust Degree is above certain threshold then the feedback of that user is submitted to our website else the user is blocked. This is how we improve website quality by our implementation.

keywords: Trust, Feedbacks, Ratings

I. INTRODUCTION :

Proposed System aims at creating trust and propagating it in online communities while giving actionable results. Those results such as trust weight, scores and Sentiment Analysis help users to make a decision about purchasing or not a particular product. Proposed design will use both ratings and especially semantic feedbacks in order to calculate trust weight and to classify comments and users.[1] Sentiment Analysis will be performed on Feedbacks. Feedbacks of the users will only be submitted to portal if the trustworthiness of the user is above certain threshold value.

II. IMPLEMENTATION

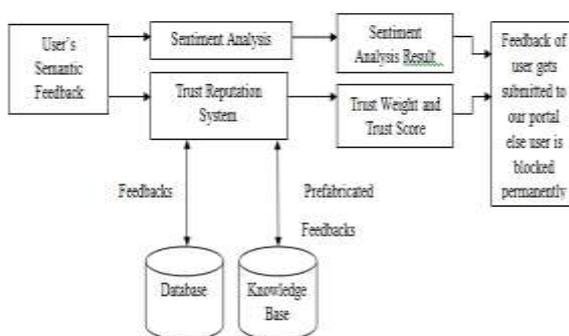


Fig 2.1 System Design

a)The user starts by giving an **appreciation** (rating) and a **textual feedback** about a specific product. When he clicks on **submit** in order to validate the given information, were

going to **redirect the user to another interface** showing this message for example: “please give us your opinion about the following feedbacks before validating the information you gave below:”

b) In this interface we will **find chosen feedbacks from the database from different types**. Those feedbacks can be fabricated in order to summarize numerous users’ feedbacks stored in the database. The generated feedbacks can be stored in another knowledge base. So as much as we add feedbacks in the ordinary data base, we will fill the knowledge data base with prefabricated feedbacks using text mining algorithms and tools. However, some users can give already summarized feedbacks that can directly be included in the knowledge data base.

c) Actually, before sending the users feedback and appreciation about the product to the trust reputation system, we have to verify the **concordance** between them in order to avoid and eliminate contradiction or malicious programs attacking our system. In the redirected interface, we will display several feedbacks from different types. However, the user can specify the number of feedbacks to be **liked** or **disliked**. Of course, we can also specify the minimum and the maximum number of feedbacks to be displayed by the user.

d)We are trying through this redirection to detect and analyze the user intention behind his intervention on the e-commerce application. Hence, we examine and evaluate his intention using other pre-fabricated feedbacks with different types. Of course, we have already the trustworthiness of each feedback. Consequently, we use our reputation algorithm studied in order to generate the user trust degree

which plays the role of a coefficient and then rectify his appreciation according to his trust degree and generates the score of the feedback.

e)Indeed, each feedback has trustworthiness in a threshold [-5,5]. The closest is the trustworthiness to 5, the most trustworthy the feedback is. The closest is the trustworthiness to -5, the very untrustworthy is the feedback. If the feedback is trustworthy its score would be included in [0,5] else it would be included in [-5,0].

f)After that, we have to generate the global trust reputation score of the product using the users appreciation (rating) and his trust degree. In fact, a possible example for such a rating method might be school marks and coefficients. Actually, at school, when a course is important for a certain field, its coefficient would be great and then the effect of its mark would be greater. In the same context, we consider the trust degree of the user as a coefficient and his appreciation as a mark. Consequently, to calculate the global trust score of the product, we sum all the appreciation values multiplied by their respective coefficient and then divide the result of the summation on the summation of all coefficients.[1].

III. RESULTS

3.1 Login Page :



Fig 3.1 Login Page

If the user is registered already with the website, the user is asked to enter correct Login Id and password else user Signs Up using Register New User link .

3.2 Home Page:



Fig 3.2 : Home Page

Home Page shows various options

3.3 Products :



Fig 3.3 Products

The product details page gives details about various products which are available in our website . User can view price and various details about the product they wish to.

3.4 Product Details :



Fig 3.4 Product Details

The above screenshot gives details about a particular product when it is selected .

3.5Feedbacks and Ratings:



Fig 3.5 Feedbacks

Above screen shot shows already submitted Feedbacks to the portal

3.6 Ratings :



Fig 3.6 Rating

Above screen shot shows a space where a user can submit new feedback and give ratings.

3.7 Request to the user to give opinion about Prefabricated Feedbacks:

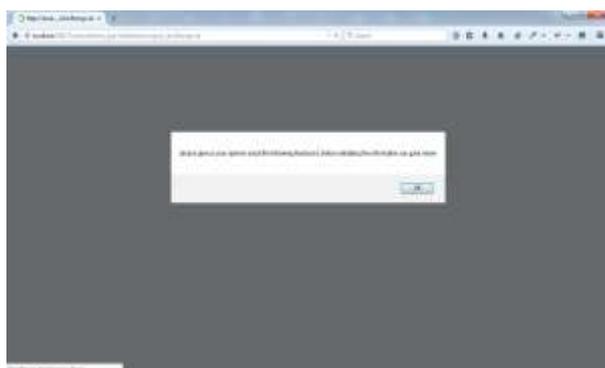


Fig 3.7 : Request to user

3.8 Prefabricated Feedbacks:



Fig 3.8 Prefabricated Feedbacks

The user is given a set of 5 prefabricated feedbacks to like or dislike. Combining all the results trust degree of the user is calculated. If the results are satisfactory the feedback of the user is submitted to the portal else the user is blocked.

IV. CONCLUSION & FUTURE SCOPE :

Semantic feedbacks are more meaningful than single scores. So using SentiWordNet[2] we have analyzed the sentiments of the feedbacks given by various users. Also the user is supposed to give rating. Combining both, sentiments behind feedback and rating the concordance of the user is checked. If concordance is satisfactory user has to like or dislike some prefabricated feedbacks which in turn gives results like trust score and trust degree. We in our implementation have considered only one of the many factors that create online environment reliable and dependable for users. In future work we will include some more factors like: familiarity, brand, size and customer service.[4]

V. REFERENCES :

- [1] Hasnae RAHIMI, Hanan EL BAKKALI, "A New Reputation Algorithm for Evaluating Trustworthiness in E-Commerce Context", IEEE, 2013
- [2] V.K. Singh, R. Piryani, A. Uddin, S, P. Waila, "Sentiment Analysis of Movie Reviews, A new Feature-based Heuristic for Aspect-level Sentiment Classification", India, IEEE,2013
- [3] Hasnae RAHIMI, Hanan EL BAKKALI, "Towards a New Design for Trust Reputation System", Information Security Research Team (ISERT),IEEE,2012
- [4] Chao-Jung Hsu, "Dominant Factors for Online