

Abstract

E-commerce portals have revolutionized and transformed all kinds of business today. Customer reach of these portals is dependent on the reputation systems that maintain Customer-to-customer (C2C) communication. Reputation systems analyze relevant customer feedback to measure the popularity of a product. Hence the output information of reputation systems is very crucial to understand the state of sales and marketing for a particular product *or industry as a whole*.

CUSUM(Cumulative Sum), used by TAUCA(Temporal And User Correlation Analysis), which was used to detect and identify the changes in customer feedbacks, is found to be sensitive to small changes only, but not suitable for the larger changes. Larger changes are not detected by CUSUM, thus reducing its effectiveness.

In this project proposal we propose Mean Bisector Analysis (MBA) as a change detector for trust evaluation. MBA plays important roles in selection of mid-value, threshold and analysis of the current rating value.

The algorithm that we have used Mean Bisector Analysis to detect the suspicious ratings of the users which help us to identify and eliminate those that are irrelevant. Hence the trust value of the users is defined by using Dempster-Shafer Algorithm.

Finally, it can be inferred from all the observations that MBA has proved to be a better model for the proposal than CUSUM, as it has a greater level of precision in detection of malicious users even among users that had claimed to be truthful.

However, experiments are necessary to identify scope for improvement of precision level for MBA as well.

Keywords: Reputation System, Trust model, Threshold value, Change Detector, Security.