A Survey paper on personalized shopping with customer opinion mining and secure payment techniques

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***Abstract* - Reputation-based trust models are important for the success of e-commerce systems. Reputation reporting systems have been implemented in e-commerce systems such as eBay and Amazon (for third-party sellers), where overall reputation scores for sellers are computed by aggregating feedback ratings. Feedback ratings are gathered together for computing sellers' reputation trust scores. A CommTrust system is proposed where the observation made by buyers are mostly used to express opinions about the product in free text feedback review. This paper provides personalized shopping app which suggest customer best seller companies with the help of opinion mining and user preferences and develop a secure transaction system with security techniques (cryptography and steganography).**
Indexterms- Electronic commerse, commTrust.

I INTRODUCTION

Accurate trust evaluation is crucial for the success of e-commerce systems. Reputation-based trust models are important for the success of e-commerce systems. Reputation reporting systems have been implemented in e-commerce systems such as eBay and Amazon (for third-party sellers), where overall reputation scores for sellers are computed by aggregating feedback ratings. For example on eBay, the reputation score for a seller is the *positive percentage score*, as the percentage of positive ratings out of the total number of positive ratings and negative ratings in the past year. But there is one problem called as the "all good reputation" problem, where feedback ratings are over 99% positive on average. Such strong positive bias cannot exactly guide buyers to select sellers to transact with. One possible reason for the lack of negative ratings at e-commerce web sites is that users who leave negative feedback ratings can attract retaliatory negative ratings and thus damage their own reputation.

Although buyers leave positive feedback ratings, they express some disappointment and negativeness in free text feedback comments, often towards specific aspects of transactions. For example, a comment like "*The products is good.*" expresses positive opinion towards the *product* aspect, whereas the comment "*Delivery was a slight slow but otherwise, great service. Like it.*" Expresses negative opinion towards the *delivery* aspect but a positive opinion to the *transaction* in general. By examining the information in feedback comments we can uncover buyers' detailed embedded opinions towards different aspects of transactions, and compute comprehensive reputation trust profiles for sellers. We propose Multi_Dimensional Trust Evaluation For E_Commerce Using Rating and Feedback Comments. The comprehensive trust profiles for sellers are calculated, including dimension reputation scores and weights, as well as overall trust scores by aggregating dimension reputation scores with feedback rating. Here we consider the different aspects of transactions as dimensions, namely product as described, shipment time, communication, and shipment handling charges. We propose *Comment-based Multi-dimensional trust (CommTrust)*, a fine-grained multi-dimensional trust evaluation model by mining e-commerce feedback comments. With CommTrust, comprehensive trust profiles are computed for sellers, including dimension reputation scores and weights, as well as overall trust scores by aggregating dimension reputation scores. To the best of our knowledge,CommTrust is the first piece of work that computes fine-grained multi-dimension trust profiles automatically by mining feedback comments. Reputation-based trust models are widely used in e-commerce applications, and feedback ratings are aggregated to compute sellers' reputation trust scores. The "all good reputation" problem, however, is prevalent in current reputation systems— reputation scores are universally high for sellers and it is difficult for potential buyers to select trustworthy sellers. In this system, based on the observation that buyers often express opinions openly in free text feedback comments, we propose CommTrust for trust evaluation by mining feedback comments. Our main contributions include: 1) we propose a multidimensional trust model for computing reputation scores from user feedback comments; and 2) we propose an algorithm for mining feedback comments for dimension ratings and weights, combining techniques of natural language processing, opinion mining, and topic modeling. This system also provides security at the time of online shopping or transaction. This system uses two level security model. Two level security model is used to prevent various possible attacks.

II OBJECTIVE

- To develop a personalized shopping app which suggest customer best seller companies with the help of opinion mining and users preferences.
- To develop a secure transaction system with security techniques (cryptography and steganography).

III LITERATURE REVIEW

Xiuzhen Zhang, Lishan Cui, and Yan Wang, Senior Member, IEEE," Computing Multi-Dimensional Trust by Mining E-Commerce Feedback Comments"[1]
Reputation-based trust models are widely used in e-commerce applications, and feedback ratings are aggregated to compute sellers' reputation trust scores. The "all good reputation" problem, however, is prevalent in current reputation systems—reputation scores are universally high for sellers and it is difficult for potential buyers to select trustworthy sellers. In this paper, based on the observation that buyers often express opinions openly in free text feedback comments, we propose CommTrust for trust evaluation by mining feedback comments. Extensive experiments on eBay and Amazon data demonstrate that CommTrust can effectively address the "all good reputation" issue and rank sellers effectively. Compute comprehensive multi-dimensional trust profiles for sellers by uncovering dimension ratings embedded in feedback comments[1].

B. Pang and L. Lee, "Opinion mining and sentiment analysis,"[7] This survey covers techniques and approaches that promise to directly enable opinion-oriented information-seeking systems. An important part of our information-gathering behavior has always been to find out what other people think. This survey covers techniques and approaches that promise to directly enable opinion-oriented information seeking systems. Our focus is on methods that seek to address the new challenges raised by sentiment ware applications, as compared to those that are already present in more traditional fact-based analysis. We include material on summarization of evaluative text and on broader issues regarding privacy, manipulation, and economic impact that the development of opinion-oriented information-access services gives rise to.

J. O'Donovan, B. Smyth, V. Evrim, and D. McLeod, "Extracting and visualizing trust relationships from online auction feedback comments,"[18]
This paper presents a system capable of extracting valuable negative information from the wealth of feedback comments on eBay, computing *personalized* and *feature-based* trust and presenting this information graphically. The algorithm operates on the assumption that online auction transactions can be categorized into a relatively small set of features. Buyers and sellers in online auctions are faced with the task of deciding who to entrust their business to based on a very limited amount of information. Current trust ratings on eBay average over 99% positive and are presented as a single number on a user's profile. This paper presents a system capable of extracting valuable negative information from the wealth of feedback comments on eBay, computing *personalized* and *feature-based* trust and presenting this information graphically.

Y. Zhang and Y. Fang, "A fine grained reputation system for reliable service selection in peer-to-peer networks,"[19]
This paper proposed a manual trust model and an automatic trust model that reduce influence of additional factors on reputation to truly reflect node trust. Distributed peer-to-peer (P2P) applications have been gaining momentum recently. In such applications, all participants are equal peers simultaneously functioning as both clients and servers to each other. A fundamental problem is, therefore, how to select reliable servers from a vast candidate pool.

IV PROBLEM DEFINITION

Reputation reporting systems have been implemented in e-commerce systems such as eBay and Amazon (for third-party sellers),where overall reputation scores for sellers are computed by aggregating feedback ratings. But there is one problem called as the "all good reputation" problem, where feedback ratings are over 99% positive on average. Such strong positive bias cannot exactly guide buyers to select sellers to transact with. So to overcome this issue, we propose Personalized shopping app with customer opinion mining and secure payment techniques.

V PROPOSED SYSTEM

Sysem Architecture
CommTrust is a one system used for trust evaluation by mining only feedback comments not the transaction feedback ratings, but there are many buyers who unable to express their opinion freely in text format. So, we have proposed the Multi_Dimensional Trust Evaluation Using Rating and Feedback where unlike the CommTrust system transaction feedback ratings are taken into consideration with feedback comments to compute the Reputation Trust score of the seller.

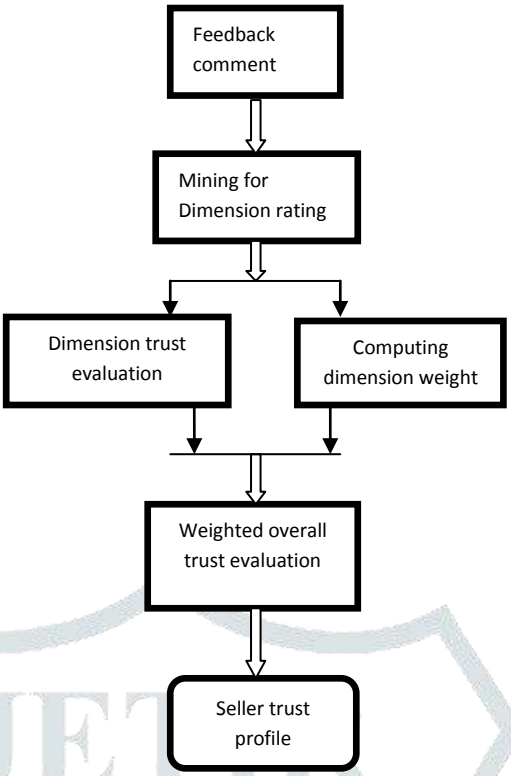

Fig1: commtrust framework

Online Payment System

2 Level Security Model

In the online payment system for doing transaction customer will register all transaction details which is a one time activity. When user come to online payment app for doing transaction, he have to go through 2 level security model to avoid and prevent attacks. 2 level security model is used to prevent 3 possible attacks given

- Shoulder Surfing attack
  If somebody is watching you while typing the details at the time of transaction
- Image Disclosure attack
  If some body made attack on your encoded image
- Email id attack
  If attacker knows your email id password

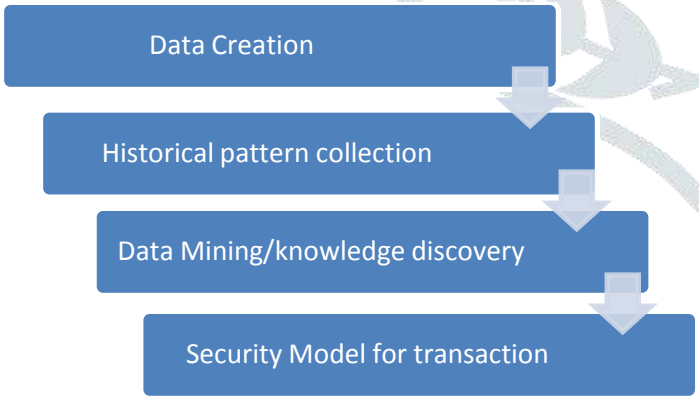

Fig 2: system architecture

1 Encoded Image Verification

When customer entered transaction details that details are encrypted and encoded into the image using image steganography and specified password. Then that encoded image will send on the registered email id. At the time of transaction, user will specify the password he decided earlier to encode details in image and the encoded image.

At the payment gateway, encoded image will be decoded with the specified password.Then decoded text will be decrypted and details are verified.

2 One time verification code Authentication

When 1st level gets satisfied the system will generate new verification code every time, encrypt it and encode it in image and System will send the verification code image on registered email id. User have to specify the encoded image of verification code. Again encoded image is decoded and decrypted to perform authentication of the decrypted code with the original code. If user specifies correct image, the user will be assumed to be authenticated and transaction get successful. Otherwise attack will be tracked and system will get locked.

VI CONCLUSION

In this way, I conclude that this system suggest customer best seller companies with the help of opinion mining and user preferences and develop a secure tranaction system with security techniques.

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