

# **EFFICIENTLY PROMOTING PRODUCT ONLINE OUTCOME: AN ITERATIVE RATING ATTACK UTILIZING PRODUCT AND MARKET PROPERTY**

## **ABSTRACT**

The prosperity of online rating system makes it a popular place for malicious vendors to mislead public's online decisions, whereas the security related studies are lagging behind. The huge profits provide great incentive for companies to manipulate online user ratings/reviews in practice. Book author's and eBay users are shown to write or buy favorable ratings for their own products. To provide an iterative rating on the utilizing product and market property reviews/ratings must be create.

## **EXISTING SYSTEM**

With the rapid growth of e-commerce and social media, online rating systems that let users post ratings/reviews of products and services are playing an increasingly important role in influencing users' online purchasing/downloading decisions. On the one hand, users may directly rank products/services according to their rating scores. On the other hand, online recommender systems that help users identify their favorable items from vast amount of products/services also take such ratings/reviews as a critical input. According to a 2013 survey conducted by Dimensional Research 88% online users have been influenced by an online user review when making a buying decision. The huge profits provide great incentive for companies to manipulate online user ratings/reviews in practice. Book authors and eBay users are shown to write or buy favorable ratings for their own products. A recent study has identified that 10% of online products have had their user ratings manipulated. Yelp has identified roughly 16% of its restaurant ratings as dishonest ratings.

## **Disadvantages**

- It cannot identify malicious reviewers by checking their review history and/or social networking connections.
- self-boosting attacks, where malicious users aim to boost rating scores of their own products, and bad-mouthing attacks, where malicious users aim to downgrade rating scores of other competitors products

## **PROPOSED SYSTEM**

In this proposed system, the feasibility of the proposed attack on other different online rating platforms. First, quantile regression models have been adopted by a number of prior works to evaluate the impact of user ratings on products' market outcome on a variety of online rating platforms and have demonstrated convincing results. Therefore, we believe that the market self-exciting power observed based on such model also exists across different online rating platforms.

Second, we acknowledge that the proposed attack may be detected by existing defense schemes. One example is the user behavior pattern based unfair rating detection which identifies malicious reviewers by checking their review history and/or social networking connections. Furthermore, since the proposed attack aims to promote products' rank, another potential defense could be tracking products' ranking and identifying the products with rapid rank changes as suspicious products. In addition, many online rating platforms verify user ratings/reviews through manual checking, customer reporting, or transaction verification, which makes the success of the proposed attack more difficult.

## **Advantages**

- It identifies malicious reviewers by checking their review history and/or social networking connections.
- if the products have become more popular (i.e. ranked more highly in the market), consumers may follow their predecessors' steps and also choose those more popular products.

## **SOFTWARE REQUIREMENTS**

Front-end : JSP  
Back-End : MySQL  
Server : Tomcat Server  
OS : WINDOWS 7/above

## **HARDWARE REQUIREMENTS**

PROCESSOR : CORE i3  
RAM : 512MB-2GB  
HARD DISK : 40GB