



4th Information Systems International Conference 2017, ISICO 2017, 6-8 November 2017, Bali, Indonesia

Evaluation of E-Commerce Product Reviews Based on Structural, Metadata, and Readability Characteristics

Rully Agus Hendrawan*, Erma Suryani, Rani Oktavia

Department of Information Systems, Institut Teknologi Sepuluh Nopember, Kampus ITS, Surabaya, 60111, Indonesia

Abstract

Online customer reviews have important role in buying decision process. Nowadays, there are a lot of customer reviews available in online marketplace so that customer can read those reviews for better understanding about product or service that they will purchase. Customer online reviews become important complementary information besides product description, expert reviews, and recommendation from the system. However, due to abundant reviews, it become unclear whether these reviews have good quality and useful for other customers. Based on a survey, 87% customers will read at least 10 reviews before deciding to buy product. New online customer reviews might have good quality but since it wasn't popular yet, the reviews will be missed by other customers. Therefore, it is necessary to evaluate the quality of customer reviews. Quality evaluation can be done based on three characteristics which are structural, metadata, and readability. Final calculation is being done using weighted sum. Feature that mostly affects quality rating of consumer review is the score of readability characteristics.

© 2017 The Authors. Published by Elsevier B.V.

Peer-review under responsibility of the scientific committee of the 4th Information Systems International Conference 2017.

Keywords: Product Metadata; Online Customer Reviews; Metadata Quality

1. Introduction

Online sites are being used not only to search for information about news, global trends, or science but also to support transactions in the online market. One of the factors that influence buying decisions in online market is the

* Corresponding author. Tel: +62-31-5999-944 ; Fax: +62-31-5964-965 .

E-mail address: eraha@is.its.ac.id

availability of sufficient information related to the product. Online reviews help customers to have better understanding of the product or service they want to purchase [1-3]. Based on a survey conducted by BrightLocal [4] in 2016, 84% of respondents trust online reviews as well as personal recommendations [2]. The previous research has also examined the role of online customer reviews in terms of customer characteristics that written the review [5]. In addition, based on research that has been done, it was proven that customer reviews can have positive impacts on sales [6-9]. Very positive reviews can affect the growth of product sales and the review helpfulness can also positively affect sales [10, 11].

Customer reviews can be defined as third party evaluation by consumer regarding of a product or service. Those reviews are shown on e-commerce sites on the side of product description to improve the perception of potential customers [1]. Customer reviews are opinions about consumer experience of purchased products or services. The customer reviews are a reliable source of information for potential customer [12]. A customer usually searches for online product reviews while evaluating other alternative products. The common sources of customer reviews are e-commerce websites that provides the feature for customer to write the product reviews and scores the product from 1 to 5 or its commonly referred to as star rating. The presence of customer reviews on e-commerce sites has shown an increased customers perception of the social presence and benefit [13]. Customer reviews have decent potential to attract potential customers to the site, increasing the spending time on the site, and indirectly forming a community between customers who frequently buy [14]. However, as more customer reviews are available on the e-commerce websites [15], its arises the question whether each review is more meaningful and useful for other customers.

One of the giant e-commerce [16, 17], Amazon.com, has a feature to evaluate customer reviews with the question "Was this review helpful?" at the end of the review. Any user who reads the review can vote whether the reviews are useful or not for them. Amazon will put a review with the most number of votes at the top so that other users know which reviews to pay attention at. However, such kind of rating is still not enough to know whether the review is useful. This is due to the sorting algorithm that made reviews which already have enough votes to be located on top rows, so they can be easily accessed by other users and tend to get more votes. Quite the opposite, new reviews that still have few votes are located on bottom row and will be easily missed. Even though new reviews might be better than top reviews that have many votes. Based on survey by BrightLocal, 87% of buyers will read at most 10 reviews to determine the purchase decision. So, well written reviews could be missed by potential customer just because they are not in top 10 ranks.

Moreover, it is often for customers to give the lowest star rating of one star or the highest star rating of five stars, but do not write the reviews in detail. There are also many customers that give the medium star rating of three stars, but the reviews are written in details and in depth. The lowest star rating and the highest star rating are known as extremity review which it means the customers give the extreme score for a product. The quality of the reviews became questionable, whether we should trust the star rating that has little to no explanation or not. Customers reviews should act as justification for the rating. This allows the other users to judge whether the reviews are fair or not. This also helps the customer to determine if the reviews can be taken into consideration for buying decision. Deeper contextual analysis is required along finding how it relates to the helpfulness value that have been given by the other users.

This research examines the quality of reviews contents based on three characteristics: structural, metadata, and readability. The structural category consists of the length of review content, number of sentences, and word count. The metadata category consists of the star rating and review extremity. Readability category consists of the readability score of review content using Flesch-Kincaid Reading Ease and Automate Readability Index test. Final evaluation is calculated using weighted sum. Reviews will then be sorted by the final score from the highest to lowest quality.

2. Related researches

This section will explain about the related theory that are being used as reference in this research.

2.1. Weighted sum

Weighted sum is a method to evaluate the alternatives based on criteria by assigning weight on those criteria. This method can be used if the used data has same unit. Also, this method is the easiest and most widely used approach. The weighting (1) is done based on the importance of these criteria to determine the alternatives [18].

Download English Version:

<https://daneshyari.com/en/article/6901087>

Download Persian Version:

<https://daneshyari.com/article/6901087>

[Daneshyari.com](https://daneshyari.com)