

Chapter 20

A Novel Method for Calculating Customer Reviews Ratings

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ABSTRACT

The number of consumers consulting online reviews in order to purchase a product or service, keeps growing. In addition to that, consumers can add an online review in order to express their experience upon the services or products received. This iterative process makes reviews matter regarding consumer's purchase decision. Apart from reviews, consumers are welcomed to provide numerical ratings for the product or services they bought. If a hotel is exposed to an online hotel review site, then it very possible to improve the possibility of a consumer to consider booking a room in this hotel. According to this chapter, regardless of positive or negative reviews, hotel awareness is enhanced. Online reviews significantly improve hotel awareness for lesser-known hotels than for well-known hotels.

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INTRODUCTION

Over the last years, almost a decade, more and more consumers consult online reviews before making any hotel arrangements (Wong & Law, 2005). On the other hand, consumers can make a post on an online review site as part of a retaliation response, when they feel betrayed by the organization or business (Grégoire & Fisher, 2008; Grégoire, Tripp, & Legoux, 2009). However, Hennig-Thurau, Gwinner, Walsh, & Gremler (2004) note the motivation to make a post can be attributed to a multitude of reasons, one of which is concern for other customers. Importantly, future consumers may rely on other consumer reviews as these are seen as relatively unbiased and independent from marketing. Chen (2008) found that recommendations of other consumers exerted more influence on their choice than did reviews from expert or firm related advisors. Apart from reviews consumers are welcomed to provide numerical ratings for the product or services they bought.

According to Vermeulen & Seegers (2009), and a study carried out, if a hotel is exposed to an online hotel review site, then it very possible to improve the possibility a consumer to consider book a room in this hotel. According to this research, regardless of positive or negative reviews, hotel awareness is enhanced. Online reviews significantly improve hotel awareness for less-known hotels than for well-known hotels. Another study had been carried out by Sparks & Browning (2011), investigating the impact of online reviews on hotel booking intentions and perception of trust. Trust is one of the most important factors in determining whether people will purchase online or not. Therefore, consumer/customer satisfaction has a two-way relation with consumer trust, if a consumer trusts the service provider that will be satisfied and simultaneously a satisfied customer will trust again the service provider.

Chen (2008) argues that potential consumers use online consumer reviews as one way to reduce risk and uncertainty in the purchase situation. The reviews and recommendations of other customers can assist in determining whether to trust the hotel under consideration. According to Papathanassis & Knolle (2011), there is a trend where positive reviews have less impact than negative reviews. According to Ye, Law, & Gu (2009), there is a significant relationship between the number of hotel/rooms bookings and hotel room rates as computed by customers' reviews. Moreover, this study proved that positive reviews contribute significantly in the number of bookings. Also, hotels with high star ratings received more online bookings, but room rate, price per night, had a negative impact on the number of online bookings.

Since, online reviews are one of the most important factors for customers to book a room or to plan a trip, this kind of information would provide valuable insights to hotel management, if this data, structured and unstructured, is efficiently and effectively analysed. In this chapter we present, a novel approach to answer the research question "Is the average rating of each hotel that has been rated by customers close to the average Sentiment Score extracted from each review?". In order to carry out this research, the TripAdvisor datasets were used (being available at <http://archive.ics.uci.edu/ml/datasets/OpinRank+Review+Dataset>; directly linking to the author of these datasets <http://kavita-ganesan.com/entityranking-data>). Two types of datasets were used for this work; a set of reviews datasets and a set of hotel dimensional information concerning the hotels for which reviews were recorded. In order to come up with solid results, significant data management, text mining and sentiment analysis were carried out.

Our work was motivated by the fact that previous methods were using only a limited number of features and did not give emphasis in exploiting the semantic/conceptual information hidden inside those selected features. Moreover, sentiment analysis techniques prove to provide valuable information

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