Sentiment Analysis in Online Food Delivery: A Greek Case Study - Abstract

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Summary

In recent years, a rapid and exponential increase in the volume of data is witnessed across various sectors and platforms, such as the retail industry and social networks respectively. Most of these data regard user-generated text, often including preferences, reviews or critics, and above all underlying sentiments. However, this data should be elaborated to contribute to business intelligence. Towards this end, sentiment analysis can help to obtain knowledge from this hidden "big data treasure" for businesses.

Sentiment Analysis (or Opinion Mining) refers to the computational approach of identifying the opinion or sentiment towards an entity and determining its polarity (positive, negative, neutral). It uses a combination of machine learning and lexical resources as lexicons to achieve the determination of the polarity. It offers the capability of creating a consumer profile by monitoring personal preferences and beliefs, as well as the way of perceiving different trends, to prompt the companies to build a new or modify an already existing strategy based on the intelligence gathered by the analysis. Gathering such information results in better understanding and serving customers, more efficient marketing, improving the quality of products and services and augmenting profit margins. So far, the approach of sentiment analysis has been implemented not only in business sectors, such as health care, tourism, and banking, but also by governments in order to monitor social media and discover citizens' concerns and sentiments.

In this context, this paper studies the potential of sentiment analysis for assessing consumer behavior in online food delivery. A literature review is conducted on the implementation of sentiment analysis approach in the food and beverage industry, including articles published between 2011 and 2021 in the scientific databases Scopus, Web of Science and Wiley Online Library. Then an overview of the top-ranked sentiment analysis tools is given including both platforms and libraries for programming languages. These tools can help identify consumers' needs. Moreover, sentiment analysis was conducted in 300 online consumers' reviews for online ordering, which were mined from one of the leading online food delivery platforms operating in Greece. The assessment regards a sample of reviews and critics in Greek. More specifically according to the results the tools used for the analysis were not very precise compared to the analysis of a human agent, a fact that creates the need of specialized lexical resources for each domain. Furthermore, it was observed that consumers are concerned mainly about the quality of their order, the delivery speed and the service of the restaurant. These results provide insights to food online retailers on the usefulness of sentiment analysis for improving the overall quality of their services, customer relationship management, as well as their business strategy.

Keywords

Sentiment Analysis, Food and Beverage Industry, Online Food Delivery, Greece