

Chapter 12

Application of Opinion Mining in E-Commerce

Brojo Kishore Mishra

C. V. Raman College of Engineering, India

Rekhanjali Sahoo

BPUT Rourkela, India

ABSTRACT

Social media has become an increasingly important part of our daily lives in the last few years. An area of substantial research is that of predicting product sales, such as books, video games, and movie tickets. Customer opinions play a very crucial role in daily life. When we have to make decisions, opinions of other individuals are also considered. Business organizations and corporate organizations are always eager to find consumer or individual views regarding their products, support, and service. In e-commerce, online shopping, and online tourism, it is very crucial to analyze the social data present on the web automatically; therefore, it is very important to create methods that automatically classify them. In this chapter, the authors do future prediction of financial market by taking past observations so that they can maximize their profit and orders can be placed on time.

INTRODUCTION

Opinion Mining or sentiment classification involves building a system to make use of reviews posted by the users and opinions that are expressed in blogs and forums as comments and reviews and sometimes may be as tweets about the product (Mining Hu & Bing Liu, 2004). Opinions are written on many things example a product, a topic, an individual, etc. In opinion mining task we identify the orientation of opinion by the holder towards any object which may be a collection of features or components or attributes. Opinion Mining sometimes called as Sentiment Classification is defined as mining and analyzing of reviews, views, emotions and opinions automatically from text, big data and speech by means of various methods (Andrea Esuli, 2008). Generally, data mining (sometimes called data or knowledge discovery) is the process of analyzing data from different perspectives and summarizing it into useful information-information that can be used to increase revenue, cuts costs, or both. (Mining Hu & Bing Liu, 2004).

DOI: 10.4018/978-1-5225-3646-8.ch012

In our proposed object Opinion mining helps in e-commerce for taking decision to buy any product. In e-commerce, online shopping and online tourism, it's very crucial to analyze the good amount of social data present on the Web automatically therefore, it's very important to create methods that automatically classify them. Opinion Mining sometimes called as Sentiment Classification is defined as mining and analyzing of reviews, views, emotions and opinions automatically from text, big data and speech by means of various methods (Mining Hu & Bing Liu, 2004). Our main theme is to create a system for analyzing opinions which implies judgment of different consumer products. In our proposed project for sales prediction we will take into consideration the present date for future prediction.

To increase the buyers know more about the credit of E-commerce product sellers and the purchase rate of the E-commerce users, E-commerce credit evaluation model based on the opinion mining algorithm was put forward (Alexander Pak and Patrick Paroubek, 2010). Extract the feature words and views from the products and user reviews, and then make use of statistical and quantitative way to analyze them. In the mean time, a credit evaluation model with transaction time-frequency can be set up, which can be used to analyze the seller's credit of E-commerce users.

Opinion Mining

Given a set of evaluative text documents D that contain opinions (or sentiments) about an object, opinion mining aims to extract attributes and components of the object that have been commented on in each document $d \in D$ and to determine whether the comments are positive, negative or neutral (Antweiler & Frank, 2004).

E-Commerce

While some use E-commerce and E-business interchangeably, they are distinct concepts. Electronic business, commonly referred to as "e-Business" or "e-business", may be defined as the application of information and communication technologies (ICT) in support of all the activities of business (Au, W.H., Chan K. C. C. & Yao, 2003). Commerce constitutes the exchange of products and services between businesses, groups and individuals and can be seen as one of the essential activities of any business. Electronic commerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses.

E-Commerce is a particular form of e-Business. Electronic business methods enable companies to link their internal and external data processing systems more efficiently and flexibly, to work more closely with suppliers and partners, and to better satisfy the needs and expectations of their customers. Compared to e-Commerce, e-Business is a more generic term because it refers not only to information exchanges related to buying and selling but also servicing customers and collaborating with business partners, distributors and suppliers.

How Opinion Mining Possible for E-Commerce

The powerful functions of the Internet have promoted the development of E-commerce. In recent years, the product view comments have been an important evaluation when customers choose the goods and the sellers (Pak & Paroubek, 2010). It is mainly because the comments are based on the experience of buying goods, and the credibility is higher. The current E-commerce shopping websites have products

24 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/application-of-opinion-mining-in-e-commerce/197198

Related Content

Weights and Multi-Edges in Link Prediction

Victor F. Cavalcante and Ana Paula Appel (2014). *Encyclopedia of Business Analytics and Optimization* (pp. 2717-2726).

www.irma-international.org/chapter/weights-and-multi-edges-in-link-prediction/107450

Skills and Competencies Required for Jobs in Business Analytics: A Content Analysis of Job Advertisements Using Text Mining

Linda A. Leon, Kala Chand Seal, Zbigniew H. Przasnyski and Ian Wiedenman (2017). *International Journal of Business Intelligence Research* (pp. 1-25).

www.irma-international.org/article/skills-and-competencies-required-for-jobs-in-business-analytics/182762

Anticipatory Standards Development and Competitive Intelligence

Françoise Bousquet, Vladislav V. Fomin and Dominique Drillon (2013). *Principles and Applications of Business Intelligence Research* (pp. 17-30).

www.irma-international.org/chapter/anticipatory-standards-development-competitive-intelligence/72559

The Study on the Application of Business Intelligence in Manufacturing: A Review

Ernie Mazuin Binti Mohd Yusof and Ahmad Rizal Mohd Yusof (2013). *International Journal of Business Intelligence Research* (pp. 43-51).

www.irma-international.org/article/study-application-business-intelligence-manufacturing/76911

Correlation between the Economy News and Stock Market in Turkey

Sadi Evren Seker, Cihan Mert, Khaled Al-Naami, Nuri Ozalp and Ugur Ayan (2013). *International Journal of Business Intelligence Research* (pp. 1-21).

www.irma-international.org/article/correlation-between-the-economy-news-and-stock-market-in-turkey/104735