

## Chapter 79

# Opinion Mining in Tourism: A Study on “Cappadocia Home Cooking” Restaurant

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### ABSTRACT

*In the tourism sector, online tourist reviews analysis is one of the methods to evaluate the products and services offered by businesses and understand the needs of tourists. These reviews take place in social networks and e-commerce sites in parallel with the developments in information and communication technologies. Tourists generate these reviews during or after their use of the products or services. In the literature, these reviews are referred to as UGC (User Generated Content) or eWOM (electronic word-of-mouth). The scientific evaluation of the textual contents in tourist reviews is done by text mining, which is a sub-area of data mining. This chapter discusses the methods and techniques of opinion mining or sentiment analysis. In addition, aspect-based sentiment analysis and techniques to be used in the application are discussed. A case study was carried out using aspect-based sentiment analysis method. In the application “Cappadocia home cooking” restaurant used tourist reviews.*

### INTRODUCTION

In tourism sector, online tourist reviews analysis is one of the methods of evaluating the products and services offered by businesses and of understanding the needs of tourists. These reviews take place in social networks and e-commerce sites in parallel with the developments in information and communication technologies. Tourists generate these reviews during or after their use of the products or services. In the literature, these reviews are referred to as UGC (User Generated Content) or eWOM (electronic

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## **Opinion Mining in Tourism**

word-of-mouth). For businesses, these reviews are of understanding the emotions of tourists and at the same time being able to solve future problems (He, Zha, & Li, 2013). In addition, these reviews are becoming more and more important for other tourists to develop their travel plans (Lei & Law, 2015). The most important reason for this situation is that tourists are more confident in the tourist's reviews that have been experienced before, rather than the information obtained from the other information sources available on the internet. Tourists consider such reviews impartial and honest (Nowacki, 2019). Before tourists decide to buy, they give importance to the ideas of other tourists (Misner & Devine, 1999). The scientific evaluation of the textual contents in tourist reviews is done by text mining, which is a sub-area of data mining. Text mining is defined as the process of extracting the implicit knowledge from textual data (Feldman & Sanger, 2006). The text classification, clustering, and association are the typical tasks of text mining (T. Jo, 2019).

Reviews on the web are collected under two categories. These categories are information that expresses facts or opinions. Facts express objective sentences that contain no emotions. Opinions are about people's natural and general subjective definitions of events and assets (Agarwal & Mittal, 2016).

Many studies in the literature have been conducted using NLP (natural language processing) method of text mining of the texts reflecting the facts. Text analyzes that express opinions are very limited. Opinion mining (OM) or sentiment analysis (SA) is a field of study that analyzes people's opinions and thoughts about assets (products, services, etc.) through texts. In other words, sentiment analysis performs the classification of an opinion as positive, neutral or negative (Mostafa, 2013). In previous studies, opinion mining is also referred to as sentiment analysis (Can & Alatas, 2017; Liu, 2012; Medhat, Hassan, & Korashy, 2014).

This study consists of two main parts. The first section discusses the methods and techniques of opinion mining or sentiment analysis. In addition, aspect-based sentiment analysis (ABSA) and techniques to be used in the application are discussed. In the second part, a case study was carried out using aspect-based sentiment analysis method. In the application "Cappadocia home cooking" restaurant tourist reviews are used.

## **BACKGROUND**

In this part, opinion mining or sentiment analysis, sentiment analysis techniques, opinion mining in tourism, challenges of opinion mining in tourism are defined and explained.

### **Opinion Mining or Sentiment Analysis**

The concepts Opinion Mining (OM), Sentiment Analysis (SA) and Subjectivity Analysis are broadly used as synonyms. According to some researchers, these concepts are explained as follows:

An opinion might possibly be merely thought as a positive or negative sentiment, view, attitude, emotion, or assessment about an entity (product, person, event, business or subject) or an aspect of this entity from a consumer or group of users (Serrano-Guerrero, et al., 2015)..

Opinions are ordinarily subjective expressions that exposit fill's sentiments, appraisals or feelings toward entities, events and their properties. A little amount of opinionated texts was available before the recent World Wide Web expansion. (Wiebe & Riloff, 2011).

Opinion mining is used to identify subjective information from text (Kaur & Chopra, 2016).

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