

Abstract

The number of reviews on a product or service, in this case, hotel reviews, with various opinions, may not be read one by one by the reader when they want to choose a hotel. The solution to this problem can be done by sentiment analysis to extract opinion on hotel reviews into positive and negative polarity reviews using the Multinomial Naïve Bayes classification algorithm which is considered appropriate to overcome the problem of sentiment analysis because in the form of document classes not only determined by words that appear but also with the number of occurrences. Also, manual labeling which is generally carried out in the case of analytical sentiments is considered to be less efficient in terms of time and energy, especially if the data used in large numbers such as hotel review data used in this study is 31317 review data. For this reason, the automatic labeling method is a solution that can be offered. Automatic labeling used in this study is based on a rating review with binary and average methods. The main results of the test in this study were the Multinomial Naïve Bayes classification method and Particle Swarm Optimization extraction features and binary and average labeling methods, respectively 86% and 83.8%.

Keywords: hotel reviews, multinomial naïve bayes, particle swarm optimization, automatic labeling, binary, average