

Abstract

Sentiment analysis allows its users to find out how other people's opinion about a product or an existing business. Consumers typically give their opinion after using the products or services that were offered. Whether a product is being liked or not, the seller can take strategic steps. The author applies the concept of text mining in the field of sentiment analysis to conduct this study. There are several stages taken. The first stage is the data preprocessing stage, at this stage the process consists of normalization, tokenization, stop word removal, and lemmatization. The second stage is the stage of learning classifier, which is a construction of a graph structure used for the classification process. There are nine types of graph, each consists of a three nodes which are, word, polarity, and aspect. After a graph is completed, the complexity value of its corresponding graph is calculated using Bayesian Formula Dirichlet Uniform Equivalence to find the best graph. The third stage is classification, at this stage whether the document is classified sentiments tend to positive, negative, or neutral conflict and its aspects whether food, ambience, miscellaneous, price or service. The fourth stage is the stage of the system evaluation, which calculates precision, recall, and F1-measure. Based on the evaluation of the system for the nine graph, best performance the author obtained are graf 5, 8 and 9 with f1-measure value of 81.25%. However, based on the calculated score graph structure with BDeu, graph 5 has the best value. So the graph 5 is the best of 9 graph that has been processed.

Keywords: Sentiment analysis, Bayesian Networks, text preprocessing, BDEU.