ABSTRACT

Customer review data plays an important role for a potential buyer. In addition to being a consideration before buying the item, prospective buyers can do research on the products to be purchased through online reviews. This is because prospective buyers cannot touch, try, or see directly. So buyers rely solely on product descriptions and reading customer reviews that have previously purchased those products. Sellers find it helpful to have customer reviews in addition to increasing the trust of potential buyers, can also review products to be sold to customers. Because sellers don't only sell their products at one merchant, there's customer review data that hasn't been automatically recorded. Therefore, this study aims to predict store ratings using supervised learning to produce models that have optimal performance. The method used is text processing which is part of machine learning with Naïve Bayes method because it only requires a small amount of training data to determine the estimated parameters needed. SVM because it can compute quickly in determining the distance of vector support and KNN because it is simple and also resistant to data that has noise. The three methods are used to predict store ratings by comparing actual data and predict data that have been averaged before using tf-IDF word weighting. The results showed the K-Nearest Neighbor Accuracy value had an accuracy rate of 95.01%, *Support Vector Machines* had an accuracy rate of 95.37%, and *Naïve Bayes* had an accuracy rate of 95.44%. In the results of this study, SVM and Naïve Bayes algorithms can help problems in predicting store ratings based on customer reviews and the model used can increase sales.

Keywords: Machine Learning, SVM, KNN, Naïve Bayes, Text Processing