

Abstract

Hoax is a series of information which is deliberately misled, but is sold as truth. The creator of the hoax wants their message to be read and then passed on to other victims in a wide range. The existence of a hoax can result in several losses. One of them can cause financial and criminal losses. This study offers a hoax news detection system in Indonesian by classify them using machine learning. In the classification process, this system consists of several stages, namely text pre-processing, weighting stage using TF-IDF and determining features with information gain, and classification using artificial neural networks back propagation. ANN is a method that is able to adapt and learn from input data so that it can predict output based on input that has been trained before. The dataset is used are 500 Indonesian language news data. The research conducted shows that ANN can be used for classification by using information gain feature selection to reduce the number of ANN inputs to improve system performance. The F-Measure value obtained was 93.56% for learning rate 0.001 at the threshold of 0.01.

Keywords: hoax, TF-IDF, artificial neural networks, information gain, back propagation