

## **Abstract**

*In this era, the news spread so freely on the internet. This make anyone able to spread the news, whether it would be positive or negative. Reported by cnnindonesia.com, according to data presented by the Ministry of Communications and Informatics in 2016 there are 800 thousand sites in Indonesia are indicated as spreading false news and hate speech. This research offer a hoax news detection system to prevent spreading of hoax news by classify them using machine learning. This system consists of three stages, first is text-preprocessing, second is weighting using TF-IDF method, and then classification using SVM. Classifier trained with 205 news (100 hoax and 105 not hoax) to get the appropriate model for the classification process. The text preprocessing results show that without stemming accuracy increased up to 13%. And the testing results show that the SVM algorithm has high F-Measure value and the accuracy with F-Measure value is 0.804 and the accuracy is 80.48%.*