

Abstract

Social media has become a source of quick but not necessarily accurate information. Especially in social media X, which is often used to share information. This research aims to conduct sentiment analysis on posts related to natural disasters that aim to maximize assistance to victims of natural disasters. This research takes datasets from tweets on social media X, the data will be labeled into positive and negative. And then the preprocessing process will be carried out, in this study, categorization will be carried out on each tweet related to the category, then the data will be divided into training and testing. Then the Term Frequency-Inverse Document Frequency (TF-IDF) feature is used to assist in reducing the weight of words that often appear in the dataset, The next step involves designing a system with a focus on applying the Support Vector Machine (SVM) Polynomial Kernel algorithm which becomes a classifier which will later be used to find the best hyperline or decision boundary that divides each review into two classes, namely positive tweets and negative tweets. Then obtained with a value of Precision of 74.28%, Recall 97.82%, F1-Score 84.44%, and Accuracy of 80.01%. This research is expected to provide involvement in making a fast and effective decision for victims of natural disasters.

Keywords: *Sentiment analysis, SVM, Natural Disaster, Social Media X*