ABSTRACT

Depression is a common mental disorder that can attack a person and resulted as decreased performance in activities, and can even cause a person to end his or her life. People with depression use social media as a place to express their thoughts through the words they use. In this study, a depression detection system will be designed in tweets uploaded on Twitter social media that can be used to detect whether a tweet has an element of depression or not.

The Random Forest classification method is a method that is included in ensemble learning, which is a combination of several classification methods to form a classification in order to get maximum results, where the method used is a decision tree. This method is used because it is easy to implement into the system. The system is made using dataset that is manually labeled, then the feature is extracted using tf-idf, which is implemented in the form of a website.

The depression element detection system using the Random Forest method has succeeded in classifying tweets in text form as to whether the tweet has depression element in it or not with the test results as follows, accuracy level at 78.29%, precision at 73.69%, recall at 69%, and F1-score at 69.99%.

Keywords: *Depression Detection, Random Forest, Machine Learning, Data Scraping, Text Mining, Natural Processing Language*