

Klasifikasi Ungkapan Depresi pada Twitter Menggunakan Ensemble Learning dengan Word2Vec

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Abstract

One of the mental health disorders experienced by people is depression. Depression is a mental disorder characterized by feelings of sadness, loss of interest or pleasure in daily activities, and decreased cognitive function that can affect social life, work, and general physical health. Early detection is needed to prevent the occurrence of bad risks. One of the early detections can be done through social media. This is because social media is one of the tools used to channel expression. This research uses data taken from Twitter social media to create a machine learning model. Before model building, data pre-processing will be carried out using Word2Vec to convert text into a continuous vector representation. The algorithm used is ensemble learning by combining five algorithms namely Logistic Regression, Decision Tree, K-Nearest Neighbor, Artificial Neural Network, and Support Vector Machine. The results show that using different Word2Vec architectures can give different performance to the model. Ensemble Learning can improve the performance of using a single model. The best results were obtained by using a data ratio of 90:10 using the Skip-gram architecture to get an accuracy value and f1-score of 94%.

Keywords: depression, twitter, ensemble learning, word2vec.
