

Abstract

The ease of disseminating information today is inseparable from the rapid development of information technology. Unfortunately, radical groups also use this condition to spread propaganda and recruit members through social media such as Facebook and Twitter. Therefore, detecting radicalism on social media is important, given the ease with which information can be spread that can affect social media users. Several studies to classify radicalism speech have been carried out using machine learning algorithms such as K-Nearest Neighbor (KNN) and Support Vector Machine (SVM). However, only a few of them use the Indonesian language and even utilized a small dataset. This study proposed to detect radicalism speech in Indonesian tweets using Convolutional Neural Network (CNN) and Word2Vec as feature extraction. The dataset is a collection of Indonesian-language tweets obtained through tweet crawling. CNN modeling is done with several scenarios with filters parameter values = 100 and 300, and kernel size parameter value = 3, 5, 7, 9. From the training process using the scenarios above, the most optimal model is obtained with parameter filters = 300 and kernel size = 7, which produces the best accuracy of 87.87% and average accuracy of 86.93%. With this model, an evaluation is carried out using test data which results in an accuracy of 87.15%.

Keywords: radicalism detection, convolutional neural network, twitter, word2vec
