Abstract

Development of technology facilitates the dissemination of information and news from various media, especially on social media. The news spread on social media is not necessarily the truth, causing a lot of fake news or hoaxes to spread and mislead the public. The number of hoaxes circulating on social media confuses readers in understanding the truth of information. Several systems for detecting hoaxes have been built using a Deep Learning approach that can process unstructured data such as text and images. In this study, three systems were built using a deep learning approach with the aim of detecting hoaxes on social media Twitter. The three deep learning methods used are Bidirectional Long Short-Term Memory (Bi-LSTM), 1 Dimensional-Convolutional Neural Network (1D-CNN), and Hybrid Bi-LSTM-1DCNN using Term Frequency - Inverse Document Frequency (TF-IDF) as feature extraction and Global Vectors (GloVe) as feature expansion. Several scenarios were applied to compare the methods to achieve the best method with the best accuracy results. The 1D-CNN method gets the highest accuracy of 96.51%, followed by Bi-LSTM with an accuracy of 96.09%, and Hybrid Bi-LSTM-1DCNN with an accuracy of 95.94%.

Keywords: hoax, social media, twitter, Bi-LSTM, 1D-CNN, hybrid