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Abstract

The rise of social media has made the spread of information almost instantaneous nowadays. Manual fact-checking cannot compete with the ease of clicking a “like” or “share” button. Consequently, false or misleading news propagates freely through social media networks, negatively impacting individuals and society. Detecting “fake news” has become a prominent area of study in several disciplines, including machine learning, data mining, and natural language processing. This research project implemented and compared the performance of several machine learning algorithms in detecting fake news. A Naive Bayes classifier was shown to have promising results for small datasets. Deep learning models such as convolutional neural networks also proved promising, although they required more training data to achieve similar results. Future work concerns exploring other neural network architectures and utilizing pre-trained models such as Google’s state-of-the-art BERT model for natural language processing.