# A Review on Fake News Detection using Machine Learning Techniques

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**Abstract.** Advances in the information and technology sector have increased the number of individuals who use the Internet on a regular basis for a variety of purposes. As a result, the popularity of social media platforms has grown. While there are numerous advantages, there are also downsides because of the high usage of social media platforms that causes major problems. The propagation of fake news through those platforms is a major problem that must be addressed by taking the appropriate efforts to detect fake news and limit or reduce its dissemination. As a result, research into the identification of fake news has gained traction in recent decades and machine learning algorithms and models have been shown to be effective and successful in the detection of fake news. The purpose of this study is to give a thorough literature review on twelve widely used algorithms by examining prior research works on each technique. This study aims to give a better understanding and support for future research by analyzing existing work to determine which techniques perform well based on characteristics such as the type of news and the dataset used to train the model. Through this study, it was evident that there are a variety of different approaches that have been used to detect fake news and there are many different types of fake news that require different types of detection techniques. The reviewed literature elaborates that combining algorithms improves performance and produces more accurate predictions. Some research show that the linear-based classifiers achieved better results than the nonlinear ones. Further research can be developed to test the effectiveness of techniques against new and different datasets as there are considerable changes in performance based on the data set used for training and to develop models that could work with all types of news.

***Keywords:*** *machine learning, fake news detection, classification algorithms, hybrid models*