**FAKE NEWS DETECTION USING MACHINE LEARNING**

**Abstract**

This Project comes up with the applications of NLP (Natural Language Processing) techniques for detecting the ‘fake news’, that is, misleading new stories that comes from the non-reputable sources. With the current usage of social media platforms, consumers are creating and sharing more information than ever before, some of which are misleading with no relevance to reality. Automated classification of a text article as misinformation or disinformation is a challenging task. Even an expert in a particular domain has to explore multiple aspects before giving a verdict on the truthfulness of an article.

In this work, we propose to use machine learning ensemble approach for automated classification of news articles. Our study explores different textual properties that can be used to distinguish fake contents from real. By using those properties, we train a combination of different machine learning algorithms using various ensemble methods and evaluate their performance on real world data sets.

It is very possible that two articles that are similar in their word count will be completely different in their meaning. The data science community has responded by taking actions against the problem. Is it possible for you to build a model that can differentiate between “Real” news “Fake” news? So, a proposed work on assembling a dataset of both fake and real news and employ a Naïve Bayes classifier in order to create a model to classify an article into fake or real based on its words and phrases.

The task of classifying news manually requires in—depth knowledge of the domain and expertise to identify anomalies in the text. In this research, we discussed the problems of classifying fake news articles using machine learning models and ensemble techniques. The data we used in our work is collected from the World Wide Web and contains news articles from various domains to cover most of the news rather than specifically classifying political news.

We extracted different textual features from the articles and used the feature set as an input to the models. Fake news detection has many open issues that require attention of researchers. For instance, in order to reduce the spread of news, identifying key elements involved in the spread of news is a important step. Graph theory ad machine learning techniques ca be employed to identify the key resources involved in spread of fake news. Likewise, real time fake news identification in videos can be another possible future detection.

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