

Detecting and Developing strategies to Mitigate Fake News Using Machine Learning

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Research Purpose

In recent times, the spread of false information is increasing at rapid pace. The research purpose is to develop strategies to identify bogus news and stop it. This includes developing machine learning algorithms like Random Forest.

The Ultimate goal of this project is to limit false news before it impacts negatively on the society, and to promote trust-worthy Information to the world.

Research Question

What machine learning techniques can be used to detect patterns in fake news and devise effective counter measures?

Anticipated Outcome

A machine learning application will be developed which will determine the truth of the news.

Background



The serious concern in the recent years is because of the information on internet, social media. This fake news created panic, confusion and also have real-world consequences.

This led to increased efforts to fight it. Many initiatives have been taken like fact-checking initiatives. But the problem still remains a challenge.

Research Methodology

1. Experimental research:

This involves changing of one or more variables and observe the effect of another variable in machine learning.

2. Survey Research:

This method is collection of data, It is done by collecting data from persons.

3. Content Analysis:

Systematic analysis on textual and visual data. Proper research on identifying trends, and patterns.

Evaluation Methodology

1. Algorithm development:

Developing various machine learning algorithms such as natural language processing and neural networks.

2. Algorithm Testing:

Testing the accuracy and reliability of algorithms using validation score, F1 Score, Accuracy and Precision.

3. Mitigation Strategy development:

These include flagging the potential fake articles or warning users about potential fake news.

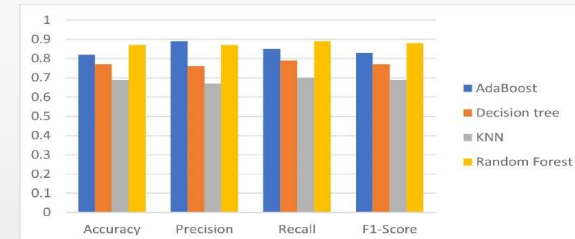
4. Outcome evaluation:

It is measure of effectiveness, how effectively the model is working. Further changes to make this evaluation better.

5. Cost analysis:

It is conducting a cost-benefit analysis of the strategies, are the applications sustainable for long run.

Results



The accuracy of all algorithms is more than 67 percent. Random Forest algorithm performs better than all algorithms with 86 percent.

Conclusion

Machine learning has high accuracy in detecting fake news. There is need for more research that needs to be implemented for dealing with real-world settings.

References

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