**Fake News Detection**

**PROJECT TITLE: Fake News Detection**

**GIT HUB LINK:**

[**https://github.com/SravaniMedarametla18/FAKE-NEWS-DETECTION-USING-MACHINE-LEARNING**](https://github.com/SravaniMedarametla18/FAKE-NEWS-DETECTION-USING-MACHINE-LEARNING)

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**IDEA DESCRIPTION:**

Fake news has been surfacing often and in great quantity online recently due to the rising development of online social networks for various economic and political goals. Users of online social networks can easily become infected by this online fake news with deceptive language, and this has already had a significant impact on offline culture. Finding bogus news quickly is a crucial step in raising the credibility of information in online social networks. This study seeks to investigate the theories, approaches, and algorithms for identifying fake news sources, authors, and subjects from online social networks and assessing the performance in this regard.

In this project we propose a method to detect Fake news and ways to apply it on social media platforms. This method uses Naive Bayes classification model and linear regression model to predict whether a post on social media will be labeled as real or fake.

**MOTIVATION:**

When we utilize supervised learning, it implies we are labeling the data, and we will be training and testing the data. Different machine learning algorithms can be performed using testing and training data and labels, but first the data must undergo preprocessing, which involves removing any non-readable null values from the data set and preparing it for prediction and accuracy tasks. By normalizing and tokenizing the input, vectors were created that the computer could comprehend. The next stage is using this data to create visual reports, which we will do by utilizing Sickit Learn and the Python Mat Plot Library. This library assists us in obtaining the findings as bar charts, pie charts, or histograms.

**GOALS AND OBJECTIVES:**

The main goal of this project is to evaluate the issues and potential significances related with the spread of fake news. We will be working on several false news data sets , using various machine learning techniques to train and test the data to determine which news is true or fake. As the fake news is a problem that has a significant impact on society and our impression of notjust the media but also facts and opinions. The challenges can be solved by applying artificial intelligence and machine learning to mine patterns from data in order to optimize well – defined objectives. Our goal is to determine which machine learning technique is most suited for which type of text dataset . Also which dataset is preferable for determining accuracies ,given accuracies are inversely proportional to the type of data and the amount of data . The more data you have , the more likely you are to achieve perfect accuracy because you can train and test more data to find out your outcomes.

**SIGNIFICANCE:**

In this day and age of digital media, the significance of identifying fake news cannot be highlighted. False or misleading material portrayed as newsworthy is known as "fake news," and it can have serious and far-reaching effects on people, society, and democracy in general.

Media organizations, digital companies, governments, and individuals must collaborate to create and execute efficient techniques for identifying fake news, advance media literacy, and promote responsible sharing of information in order to stop the spread of false information. In the age of the internet, it is important to implement an integrated approach to preserve the accuracy of information while maintaining the safety of individuals and the community.

**LITERATURE SURVEY :**

The purpose of this study is to gather a large series of related studies conducted in the field of social network false news identification. Thus, I continue my survey from many sources, including Facebook, Twitter, and others, in an effort to figure out the possible accuracy of general knowledge. In this review, will be working on the papers which have achieved the possible results in detecting the untruthful news over Social media, Posts sharing attitude on Facebook, sentiment analysis on Facebook, identifying fake users and fake news in the Twitter social network, fraudulent attempt to obtain sensitive information on Facebook.

This article has described many automatic methods for identifying posts that include wrong information. Since there are many other ways to identify fake news, like use of clickbait to spread rumors and chatbots to spread false information. In social media networks like Facebook, there are a lot of clickbait articles that encourage sharing and liking of postings, which gives false information. Many efforts have been made to identify fabricated data.

**OBJECTIVES** :

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**FEATURES:**

There may be other projects related to **Fake News Detection Using Machine Learning**, but combining the two in a single project can make " **Fake News Detection Using Machine Learning**" stand out. Here are some possible differences and features that distinguish this project from others:

Focus on Social Media :

This project focuses on social media, notably Facebook, where the spread of fake news is a major concern. It recognizes the particular difficulties of dealing with misinformation in the setting of a widely utilized social network.

Multiple Aspect Detection:

Unlike some other fake news detection efforts, this one seeks to detect phony news pieces, producers, and subjects. It takes an integrated strategy to addressing misinformation from various viewpoints.

Recognizing Web-Scale Data Challenges:

The project understands the difficulties provided by the large-scale nature of web data. It acknowledges the challenges of detecting, analyzing, and correcting fake news on platforms with huge amounts of content.

**EXPECTED OUTCOME:**

The project's intended objective is to contribute to a better knowledge of fake news issues, provide insights into successful machine learning approaches for false news identification, and offer ideas for dealing with the obstacles connected with fake news in the age of digital media.

**REFERENCES :**

Shao, C., Ciampaglia, G. L., Varol, O., Flammini, A., & Menczer, F. (2017). The

spread of fake news by social bots. arXiv preprint arXiv:1707.07592, 96-104.

Chen, Y., Conroy, N. J., & Rubin, V. L. (2015, November). Misleading online

content: Recognizing clickbait as false news. In Proceedings of the 2015 ACM on

Workshop on Multimodal Deception Detection (pp. 15-19).

Najafabadi, M. M., Villanustre, F., Khoshgoftaar, T. M., Seliya, N., Wald, R., &

Muharemagic, E. (2015). Deep learning applications and challenges in big data

analytics. Journal of Big Data, 2(1), 1.

Haiden, L., & Althuis, J. (2018). The Definitional Challenges of Fake News.