**Fake News Detector**

This project aims to build a machine learning model to detect fake news using a Decision Tree Classifier in Python. The model is trained on labeled datasets containing both true and fake news articles.

**Dataset Preparation and Preprocessing**

* Two datasets, one containing true news and the other containing fake news, were loaded.
* The datasets were concatenated and preprocessed using the NLTK library. Text was converted to lowercase, punctuations were removed, and stopwords were eliminated to clean the data.

**Data Visualization**

* Matplotlib was used to visualize the dataset with different parameters to gain insights into the distribution and characteristics of the data.

**Model Training and Testing**

* The preprocessed data was split into training and testing sets.
* The training set was fed into the DecisionTreeClassifier model.
* The model was tested for accuracy score to evaluate its performance in distinguishing between true and fake news.

**Usage**

1. Ensure you have Python installed on your system.
2. Install the necessary libraries by running **pip install nltk matplotlib**.
3. Clone this repository to your local machine.
4. Run the **fake\_news\_detector.py** script to train the model and test its accuracy.
5. Experiment with different parameters and datasets to improve the model's performance.

**Contributors**

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* This project was inspired by the need for reliable fake news detection mechanisms.
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