**FAKE NEWS DETECTION**

PROBLEM STATEMENT: -

Develop an AI-powered fake news detector that can quickly tell if an article is real or fake based on **NLP** and **ML**. It should scour the web for news from different sites and automatically sort it into "real deal" or "BS." The goal is to help slow down the spread of false information and make online content more trustworthy overall.

USE CASE: -

Enhancing social media Integrity and User Trust  
  
Websites and apps like Facebook, Twitter, and Reddit have big problems checking what people post there. Fake news, which means lying on purpose, can be really bad. It can change what people think, mess up elections, make people look bad, and start fights. It's super important for these sites to stop fake news so people trust them and follow the rules.

**Applications:**

* Social Media Platforms: Automatically flagging or removing false information to reduce the spread of misinformation.
* News Aggregators: Ensuring the credibility of news sources and the accuracy of shared articles.
* Online Communities: Moderating user-generated content to prevent the spread of fake news.
* Advertising Platforms: Preventing fraudulent claims and misleading advertisements.
* Corporate Reputation Management: Protecting brands from fake news that can harm their reputation.

**Dataset Details:**

* Name: Fake News Dataset
* Source: [Kaggle Fake News Dataset](https://www.kaggle.com/datasets/mohamadalhasan/a-fake-news-dataset-around-the-syrian-war)
* Description: This dataset contains labelled data for news articles. The articles are labelled as "Fake" or "Real", providing a balanced dataset for binary classification.
* Fields:
  + id: Unique identifier for the news article
  + title: The headline or title of the news article
  + author: The author of the news article
  + text: The main content of the news article
  + label: Binary label (1: Fake, 0: Real)
* Usage:
* This dataset can be used to train machine learning models, such as logistic regression, support vector machines (SVM), and neural networks, to classify news articles based on their content. It can also be used to extract features for more advanced NLP techniques, such as word embeddings and sentiment analysis.

Example Data Entry:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| id | title | author | text | label |
| 1 | "Breaking news: ..." | John Doe | "The article content goes here and describes the event." | 1 |
| 2 | "Latest updates on ..." | Jane Smith | "This is a detailed report on the latest happenings..." | 0 |