

# **News Identifier Project**

**By: Hardi Dave, Dhairya Patel, and Avi Patel**

## **Abstract:**

The study aims to analyze using machine learning models the authenticity of news received through social media whether information is true or false. This analysis uses a dataset from Kaggle to further train and test some machine learning models in predicting the various news content. The study will focus on the development of an effective framework to help identify fake news and improve the accuracy of information sharing on social media.

## **Introduction:**

The rise of social media has changed how people consume news, making information more accessible and instantaneous. However, this convenience has also led to a significant challenge: the spread of misinformation and disinformation. As fake news stories multiply, they often reach large audiences faster than accurate news, causing confusion, mistrust, and sometimes even harm. Identifying whether the news shared on social media platforms is true or false has become a crucial task in maintaining the integrity of public discourse.

Machine learning has become a powerful tool in addressing this challenge by automating the process of news verification. By analyzing large amounts of data, machine learning models can be trained to identify patterns that distinguish between fake and genuine news. This study aims to explore how machine learning techniques can be used to determine the authenticity of news shared on social media platforms. We will utilize a Kaggle dataset for training and testing our predictive models.

This study will not only focus on the technical aspects of news verification but will also examine the role of human behavior in the spread of misinformation. The goal is to create a comprehensive approach that combines machine learning tools with media literacy and awareness to reduce the harmful effects of fake news on social media.

## **Helpful For Society:**

- Reducing the spread of misinformation
- Protecting public trust
- Provide true information to people

## **Tools and Technology used:**

- Tools: TextBlob and Jupyter Notebook
- Technology: Python language
- Machine Learning Models: Decision Tree Classifier, XGBoost, and KNN
- Libraries and Frameworks: TensorFlow

## **Dataset:**

From Kaggle: <https://www.kaggle.com/datasets/bhavikjikadara/fake-news-detection>