FAKE NEWS DETECTION

By

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BONAFIDE CERTIFICATE

Certified that this project report entitled "**FAKE NEWS DETECTION"** is a bonafide work of **APURV CHOUDHARY- 20BEC1233, SALUGU MANOJ- 20BEC1213, PRATYUSH RAJ- 20BEC1273,** who carried out the Project work under my supervision and guidance for **CSE3505 – FAKE NEWS DETECTION.**

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ABSTRACT

In today's world, fake news has become a serious threat to many people. Fake News can be any news, story, or hoax that misinform people or deceive the readers. Social media apps like Facebook, Instagram, and even Google are how fake news is growing.

Fake news exist way before from social media but it multifold when social media was introduced. Fake news is a news designed to deliberately spread hoaxes, propaganda and disinformation.Fake News stories usually spread through social media sites like Facebook, Twitter etc.The fake news on social media and various other media is wide spreading and is a matter of serious concern due to its ability to cause a lot of social and national damage with destructive impacts. A lot of research is already focused on detecting it. This paper makes an analysis of the research related to fake news detection and explores the traditional machine learning models to choose the best, in order to create a model of a product with supervised machine learning algorithm, that can classify fake news as true or false, by using tools like python scikit-learn, NLP for textual analysis. This process will result in feature extraction and vectorization; we propose using Python scikit-learn library to perform tokenization and feature extraction of text data, because this library contains useful tools like Countvectorizer and Tiff Vectorizer. Then, we will perform feature selection methods, to experiment and choose the best fit features to obtain the highest precision, according to confusion matrix results.

ACKNOWLEDGEMENT

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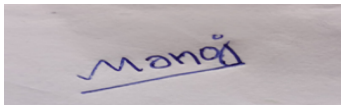
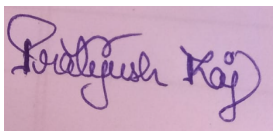
We thank our parents, family, and friends for bearing with us throughout the course of our project and for the opportunity they provided us in undergoing this course in such a prestigious institution.





APURV CHOUDHARY **SALUGU MANOJ** **PRATYUSH RAJ**

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1. INTRODUCTION

Fake news is untrue information presented as news. It often has the aim of damaging the reputation of a person or entity or making money through advertising revenue. Once common in print, the prevalence of fake news has increased with the rise of social media, especially the Facebook News Feed. During the 2016 US presidential election, various kinds of fake news about the candidates were widely spread in the online social networks, which may have a significant effect on the election results.

As more and more of our lives are spent communicating online across social networking channels, more and more individuals prefer to search for and absorb social media news instead of conventional news organizations.

First, the essence of these social media sites is implicit in the reasons for this shift in consumption behavior. The widespread distribution of false news can have a significant adverse effect on people and society. Second, fake news will break the news ecosystem's balance of credibility. For instance, it is obvious that during the U.S. presidential election of 2016, the most popular fake news was much more frequently circulated on Facebook than the most popular authentic mainstream news. Thus, we begin our work by understanding the crucial role of the art to detect fake news or not.

1.1 LITERATURE REVIEW

There are several algorithms for detecting fake news. For that we analyze through different classifiers in different research papers. The classifiers are Random Forest, CNN, SVM, KNN, Logistic Regression, Naive Bayes, Long Short Term memory and SGD. The accuracy obtained by using Random forest is 83 %, the accuracy obtained by using CNN is 97%, the accuracy obtained by using SVM is 94%, the accuracy obtained by using KNN is 79%, the accuracy obtained by using Logistic Regression is 97%, the accuracy obtained by using Naive Bayes is 90%, the

accuracy obtained by using Long Short term memory is 97%, the accuracy obtaining by using the combination of SVM &NB is 78% and the accuracy obtained by using SGD is 77.2%. Compared to all CNN,LR and LSTM obtains high accuracy.

S No.	Authors	Year	Title	Publisher	Methodology	Advantages	Drawbacks
1	K. Harshitha, Aditya V, Dr. P. Lakshmi Harika, P. Veejendhiran, Dr. M R Sumalatha	2022	Fake News Detection	IJERT	In this project, we train a random forest model to assess if the news is fake or not using the ”kaggle real and fake news dataset.” Detailed background study has been discussed with related papers in a comparative way. Final results of the proposed work have been analyzed with various existing measures and provided ideal values, graphs, plots and equations were placed for clarity.	Increase of accuracy using Decision Trees and Random Forest.	Logistic Regression isn’t good for accuracy.

2	Hemalatha A, Karpahalakshmi S, Thanga Sri R, Vaishnavi M, Bhavani N	2022	Fake News Detection Using Machine Learning	IJERT	TF-IDF vectorizer technology is used in the model.The TF-IDF Vectorizer converts a collection of raw documents into a matrix of TF-IDF features.Passive Aggressive algorithms are online learning algorithms used in this model.*Confusion Matrix and a sentimental analyzer using NLP is also used in this model.*	Increases accuracy using TF-IDF vectorizer,Passive aggressive classifier and VaderSentiment.	One of the drawbacks to this model is to give less details on the fake news detection by including the publisher of the article,subject of the article and also not being able to detect the visual-based information as real or fake.
3	Z Khanam1 , B N Alwasel1 , H Sirafi1 and M Rashid	2020	Fake News Detection Using Machine Learning Approaches	IOPC	By applying supervised machine learning algorithms on an annotated (labeled) dataset, that are manually classified and guaranteed. Then, feature selection methods are applied to experiment	Higher accuracy using the following algorithms XGboost. Random Forests. Naive Bayes. K-Nearest Neighbors (KNN). Decision Tree. SVM	Time complexity must be reduced for the real time scenarios.

					and choose the best fit features to obtain the highest precision, according to confusion matrix results		
4	Uma Sharma, Sidarth Saran, Shankar M. Patil	2021	Fake News Detection using Machine Learning Algorithms	IJERT	This paper explains the system which is developed in three parts. The first part is static which works on machine learning classifier. They studied and trained the model with 4 different classifiers and chose the best classifier for final execution. The second part is dynamic which takes the keyword/text from user and searches online for the truth probability of the news. The third part provides the authenticity of the URL input by user.	Using Vector features- Count Vectors and Tf-Idf vectors at Word level and Ngram-level. Accuracy was noted for all models. We used K-fold cross validation technique to improve the effectiveness of the models.	Not being able to build their own dataset which will be kept up to date according to the latest news. All the live news and latest data will be kept in a database using Web Crawler and online database
5	Dr. S. Rama Krishna,Dr. S. V.	2021	Survey on Fake News	IJERT	After pre-processing	Accuracies of Logistic	Random Forest classifier ,

	Vasantha,K. Mani Deep		Detection using Machine learning Algorithms		. The performance of machine learning models depends a great deal on feature design. Used techniques Naive Bayes, Random Forest, Decision Tree, Logistic Regression and Support Vector Machine on Liar Dataset.	Regression, Support Vector Machine, Naïve Bayes model, Random Forest and Decision tree models. Experiments result in Random Forest better performed compared to remaining models.	Convolutional Neural Networks , Long Short Term Memory for high accuracy could be used and an Ensemble Learning Approach for high accuracy

1.2 PROBLEM STATEMENT

- By clicking on a clickbait, users are led to a page that contains false information.
- Fake news influences people's perceptions.
- The rise of Fake news has become a global problem that even major tech companies like Facebook and Google are struggling to solve. It can be difficult to determine whether a text is factual without additional context and human judgment.

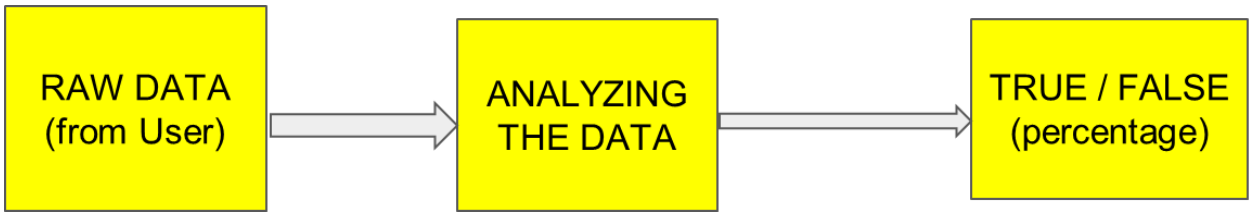
1.3 OBJECTIVES AND GOALS

- To create a system which detects fake news automatically and tells whether the information is correct or not.
- To make people aware that all the news we hear are not the ones which are actually true.

1.4 APPLICATIONS

- Advertisers take the Advantages of Fake News but by this fake news detection technique we will limit them , that will in turn result in less advertisements that are unreliable and false.
- Influencers also take advantage of Fake News; they tend to defend false news and claim that it is correct either due to their personal interest or for publicity stunts that will in turn reduce the opportunity for such kinds of activities.
- Political Warfare :- political leaders tend to use false news for their parties or their personal interest. This way people vote wrong political leaders and that affects the governance in the long run , that will in turn result in proper governance.
- Defamation is among the disadvantages of fake news , nowadays people tend to defame others to increase their value in the market. This causes disrest in the society among the people, so this way fake news detection can maintain peace to some extent.
- Fake News Cost lives:- people tend to believe fake news easily and the steps they take may harm them unknowingly. By identifying fake news we can reduce the number of cases where people harm themselves by relying on fake news.

2. DESIGN & BLOCK DIAGRAM



This python project of detecting fake news deals with fake and real news. Using sklearn, we build a TfidfVectorizer on our dataset. . In the end, the accuracy score and the confusion matrix tell us how well our model fares.

First, the model will read the true datasets and false datasets, then, it inserts a column “class” as a target feature. After merging True & Fake dataframes, we are removing unnecessary columns (like title, subject, date). Then we shuffled the resulting datasets and reseted the index. Then, we created a function to filter and remove unnecessary characters. After filtering, the model is trained with the test-train ratio as 25:75 %. Then, we applied different algorithms like, Logistic Regression, Decision Tree Classifier, Gradient Boosting Classifier and Random Forest Classifier to test the prediction of data.

3. SOFTWARE –CODING AND ANALYSIS

Programming Language: Python

CODE & OUTPUT:

```
import pandas as pd

import numpy as np

import seaborn as sns

import matplotlib.pyplot as plt

from sklearn.model_selection import train_test_split

from sklearn.metrics import accuracy_score

from sklearn.metrics import classification_report

import re

import string


df_fake = pd.read_csv("C:/Users/pratyush2331/Downloads/Fake.csv")

df_true = pd.read_csv("C:/Users/pratyush2331/Downloads/True.csv")


df_fake
```

Out[3]:

	title	text	subject	date
0	Donald Trump Sends Out Embarrassing New Year'...	Donald Trump just couldn t wish all Americans ...	News	December 31, 2017
1	Drunk Bragging Trump Staffer Started Russian ...	House Intelligence Committee Chairman Devin Nu...	News	December 31, 2017
2	Sheriff David Clarke Becomes An Internet Joke...	On Friday, it was revealed that former Milwauk...	News	December 30, 2017
3	Trump Is So Obsessed He Even Has Obama's Name...	On Christmas day, Donald Trump announced that ...	News	December 29, 2017
4	Pope Francis Just Called Out Donald Trump Dur...	Pope Francis used his annual Christmas Day mes...	News	December 25, 2017
...	...	...	...	...
23476	McPain: John McCain Furious That Iran Treated ...	21st Century Wire says As 21WIRE reported earl...	Middle-east	January 16, 2016
23477	JUSTICE? Yahoo Settles E-mail Privacy Class-ac...	21st Century Wire says It s a familiar theme. ...	Middle-east	January 16, 2016
23478	Sunnistan: US and Allied 'Safe Zone' Plan to T...	Patrick Henningsen 21st Century WireRemember ...	Middle-east	January 15, 2016
23479	How to Blow $700 Million: Al Jazeera America F...	21st Century Wire says Al Jazeera America will...	Middle-east	January 14, 2016
23480	10 U.S. Navy Sailors Held by Iranian Military ...	21st Century Wire says As 21WIRE predicted in ...	Middle-east	January 12, 2016

23481 rows × 4 columns

```
df_true
```

Out[4]:

	title	text	subject	date
0	As U.S. budget fight looms, Republicans flip t...	WASHINGTON (Reuters) - The head of a conservat...	politicsNews	December 31, 2017
1	U.S. military to accept transgender recruits o...	WASHINGTON (Reuters) - Transgender people will...	politicsNews	December 29, 2017
2	Senior U.S. Republican senator: 'Let Mr. Muell...	WASHINGTON (Reuters) - The special counsel inv...	politicsNews	December 31, 2017
3	FBI Russia probe helped by Australian diplomat...	WASHINGTON (Reuters) - Trump campaign adviser ...	politicsNews	December 30, 2017
4	Trump wants Postal Service to charge 'much mor...	SEATTLE/WASHINGTON (Reuters) - President Donal...	politicsNews	December 29, 2017
...	...	...	...	...
21412	'Fully committed' NATO backs new U.S. approach...	BRUSSELS (Reuters) - NATO allies on Tuesday we...	worldnews	August 22, 2017
21413	LexisNexis withdrew two products from Chinese ...	LONDON (Reuters) - LexisNexis, a provider of l...	worldnews	August 22, 2017
21414	Minsk cultural hub becomes haven from authorities	MINSK (Reuters) - In the shadow of disused Sov...	worldnews	August 22, 2017
21415	Vatican upbeat on possibility of Pope Francis ...	MOSCOW (Reuters) - Vatican Secretary of State ...	worldnews	August 22, 2017
21416	Indonesia to buy $1.14 billion worth of Russia...	JAKARTA (Reuters) - Indonesia will buy 11 Sukh...	worldnews	August 22, 2017

```
df_fake["class"] = 0

df_true["class"] = 1

df_fake.shape, df_true.shape
```

Out[6]: ((23481, 5), (21417, 5))

```
# Removing last 10 rows for manual testing

df_fake_manual_testing = df_fake.tail(10)

for i in range(23480,23470,-1):

    df_fake.drop([i], axis = 0, inplace = True)
```

```
df_true_manual_testing = df_true.tail(10)

for i in range(21416,21406,-1):

    df_true.drop([i], axis = 0, inplace = True)
```

```
df_fake.shape,                                                    df_true.shape
```

Out[8]: ((23471, 5), (21407, 5))

```
df_fake_manual_testing["class"] = 0

df_true_manual_testing["class"] = 1
```

```
df_fake_manual_testing.head(10)
```

Out[11]:

	title	text	subject	date	class
21407	Mata Pires, owner of embattled Brazil builder ...	SAO PAULO (Reuters) - Cesar Mata Pires, the ow...	worldnews	August 22, 2017	1
21408	U.S., North Korea clash at U.N. forum over nuc...	GENEVA (Reuters) - North Korea and the United ...	worldnews	August 22, 2017	1
21409	U.S., North Korea clash at U.N. arms forum on ...	GENEVA (Reuters) - North Korea and the United ...	worldnews	August 22, 2017	1
21410	Headless torso could belong to submarine journ...	COPENHAGEN (Reuters) - Danish police said on T...	worldnews	August 22, 2017	1
21411	North Korea shipments to Syria chemical arms a...	UNITED NATIONS (Reuters) - Two North Korean sh...	worldnews	August 21, 2017	1
21412	'Fully committed' NATO backs new U.S. approach...	BRUSSELS (Reuters) - NATO allies on Tuesday we...	worldnews	August 22, 2017	1
21413	LexisNexis withdrew two products from Chinese ...	LONDON (Reuters) - LexisNexis, a provider of l...	worldnews	August 22, 2017	1
21414	Minsk cultural hub becomes haven from authorities	MINSK (Reuters) - In the shadow of disused Sov...	worldnews	August 22, 2017	1
21415	Vatican upbeat on possibility of Pope Francis ...	MOSCOW (Reuters) - Vatican Secretary of State ...	worldnews	August 22, 2017	1
21416	Indonesia to buy $1.14 billion worth of Russia...	JAKARTA (Reuters) - Indonesia will buy 11 Sukh...	worldnews	August 22, 2017	1

```
df_true_manual_testing.head(10)
```

Out[11]:

	title	text	subject	date	class
21407	Mata Pires, owner of embattled Brazil builder ...	SAO PAULO (Reuters) - Cesar Mata Pires, the ow...	worldnews	August 22, 2017	1
21408	U.S., North Korea clash at U.N. forum over nuc...	GENEVA (Reuters) - North Korea and the United ...	worldnews	August 22, 2017	1
21409	U.S., North Korea clash at U.N. arms forum on ...	GENEVA (Reuters) - North Korea and the United ...	worldnews	August 22, 2017	1
21410	Headless torso could belong to submarine journ...	COPENHAGEN (Reuters) - Danish police said on T...	worldnews	August 22, 2017	1
21411	North Korea shipments to Syria chemical arms a...	UNITED NATIONS (Reuters) - Two North Korean sh...	worldnews	August 21, 2017	1
21412	'Fully committed' NATO backs new U.S. approach...	BRUSSELS (Reuters) - NATO allies on Tuesday we...	worldnews	August 22, 2017	1
21413	LexisNexis withdrew two products from Chinese ...	LONDON (Reuters) - LexisNexis, a provider of l...	worldnews	August 22, 2017	1
21414	Minsk cultural hub becomes haven from authorities	MINSK (Reuters) - In the shadow of disused Sov...	worldnews	August 22, 2017	1
21415	Vatican upbeat on possibility of Pope Francis ...	MOSCOW (Reuters) - Vatican Secretary of State ...	worldnews	August 22, 2017	1
21416	Indonesia to buy $1.14 billion worth of Russia...	JAKARTA (Reuters) - Indonesia will buy 11 Sukh...	worldnews	August 22, 2017	1

```
df_manual_testing                                                    =
pd.concat([df_fake_manual_testing,df_true_manual_testing], axis = 0)

df_manual_testing.to_csv("manual_testing.csv")
```

```
df_merge = pd.concat([df_fake, df_true], axis =0 )

df_merge.head(10)
```

Out[13]:

	title	text	subject	date	class
0	Donald Trump Sends Out Embarrassing New Year'...	Donald Trump just couldn t wish all Americans ...	News	December 31, 2017	0
1	Drunk Bragging Trump Staffer Started Russian ...	House Intelligence Committee Chairman Devin Nu...	News	December 31, 2017	0
2	Sheriff David Clarke Becomes An Internet Joke...	On Friday, it was revealed that former Milwauk...	News	December 30, 2017	0
3	Trump Is So Obsessed He Even Has Obama's Name...	On Christmas day, Donald Trump announced that ...	News	December 29, 2017	0
4	Pope Francis Just Called Out Donald Trump Dur...	Pope Francis used his annual Christmas Day mes...	News	December 25, 2017	0
5	Racist Alabama Cops Brutalize Black Boy While...	The number of cases of cops brutalizing and ki...	News	December 25, 2017	0
6	Fresh Off The Golf Course, Trump Lashes Out A...	Donald Trump spent a good portion of his day a...	News	December 23, 2017	0
7	Trump Said Some INSANELY Racist Stuff Inside ...	In the wake of yet another court decision that...	News	December 23, 2017	0
8	Former CIA Director Slams Trump Over UN Bully...	Many people have raised the alarm regarding th...	News	December 22, 2017	0
9	WATCH: Brand-New Pro-Trump Ad Features So Muc...	Just when you might have thought we d get a br...	News	December 21, 2017	0

```
df_merge.columns
```

Out[14]:
```
Index(['title', 'text', 'subject', 'date', 'class'], dtype='object')
```

```
df = df_merge.drop(["title", "subject","date"], axis = 1)

df.isnull().sum()
```

Out[16]:
```
text     0
class    0
dtype: int64
```

```
df = df.sample(frac = 1)
```

Out[18]:

	text	class
15230	MADRID (Reuters) - Spain s state prosecutor on...	1
13049	MEXICO CITY (Reuters) - Mexican soldiers arbit...	1
10851	What a great pick by the Trump administration!...	0
986	KINSHASA (Reuters) - U.S. Ambassador to the Un...	1
18258	MOSCOW (Reuters) - Iran must stop meddling in ...	1

```
df.head()
```

Out[18]:

	text	class
15230	MADRID (Reuters) - Spain s state prosecutor on...	1
13049	MEXICO CITY (Reuters) - Mexican soldiers arbit...	1
10851	What a great pick by the Trump administration!...	0
986	KINSHASA (Reuters) - U.S. Ambassador to the Un...	1
18258	MOSCOW (Reuters) - Iran must stop meddling in ...	1

```
df.reset_index(inplace = True)
```

```
df.drop(["index"], axis = 1, inplace = True)
```

```
df.columns
```

Out[20]: `Index(['text', 'class'], dtype='object')`

```
df.head()
```

Out[21]:

	text	class
0	MADRID (Reuters) - Spain s state prosecutor on...	1
1	MEXICO CITY (Reuters) - Mexican soldiers arbit...	1
2	What a great pick by the Trump administration!...	0
3	KINSHASA (Reuters) - U.S. Ambassador to the Un...	1
4	MOSCOW (Reuters) - Iran must stop meddling in ...	1

```
def wordopt(text):
    text = text.lower()
    text = re.sub('\[.*?\]', '', text)
    text = re.sub("\\W"," ",text)
    text = re.sub('https?://\S+|www\.\S+', '', text)
    text = re.sub('<.*?>+', '', text)
    text = re.sub('[%s]' % re.escape(string.punctuation), '', text)
    text = re.sub('\n', '', text)
    text = re.sub('\w*\d\w*', '', text)
    return text
```

```
df["text"] = df["text"].apply(wordopt)
```

```
x = df["text"]
```

```
y = df["class"]
```

```
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.25)
```

```
from sklearn.feature_extraction.text import TfidfVectorizer
```

```
vectorization = TfidfVectorizer()
```

```
xv_train = vectorization.fit_transform(x_train)
```

```
xv_test = vectorization.transform(x_test)
```

```
from sklearn.linear_model import LogisticRegression
```

```
LR = LogisticRegression()
```

```
LR.fit(xv_train,y_train)
```

```
Out[27]: LogisticRegression()
```

```
pred_lr=LR.predict(xv_test)
```

```
LR.score(xv_test, y_test)
```

```
Out[29]: 0.9863636363636363
```

```
print(classification_report(y_test, pred_lr))
```

```
              precision    recall  f1-score   support

           0       0.99      0.99      0.99      5866
           1       0.98      0.99      0.99      5354

    accuracy                           0.99     11220
   macro avg       0.99      0.99      0.99     11220
weighted avg       0.99      0.99      0.99     11220
```

```
from sklearn.tree import DecisionTreeClassifier
```

```
DT = DecisionTreeClassifier()

DT.fit(xv_train, y_train)
```

Out[31]:
```
DecisionTreeClassifier()
```

```
pred_dt = DT.predict(xv_test)

DT.score(xv_test, y_test)
```

Out[33]:
```
0.996078431372549
```

```
print(classification_report(y_test, pred_dt))

from sklearn.ensemble import GradientBoostingClassifier

GBC = GradientBoostingClassifier(random_state=0)

GBC.fit(xv_train, y_train)
```

Out[35]:
```
GradientBoostingClassifier(random_state=0)
```

```
pred_gbc = GBC.predict(xv_test)

GBC.score(xv_test, y_test)
```

Out[37]:
```
0.9961675579322639
```

```
print(classification_report(y_test, pred_gbc))
```

```
              precision    recall  f1-score   support

           0       1.00      0.99      1.00      5866
           1       0.99      1.00      1.00      5354

    accuracy                           1.00     11220
   macro avg       1.00      1.00      1.00     11220
weighted avg       1.00      1.00      1.00     11220
```

```
from sklearn.ensemble import RandomForestClassifier

RFC = RandomForestClassifier(random_state=0)

RFC.fit(xv_train, y_train)
```

Out[39]:
```
RandomForestClassifier(random_state=0)
```

```
pred_rfc = RFC.predict(xv_test)
```

```
RFC.score(xv_test, y_test)
```

```
Out[41]: 0.9893939393939394
```

```
print(classification_report(y_test, pred_rfc))
```

```
              precision    recall  f1-score   support

           0       0.99      0.99      0.99      5866
           1       0.99      0.99      0.99      5354

    accuracy                           0.99     11220
   macro avg       0.99      0.99      0.99     11220
weighted avg       0.99      0.99      0.99     11220
```

```
def output_lable(n):
    if n == 0:
        return "Fake News"
    elif n == 1:
        return "Not A Fake News"


def manual_testing(news):
    testing_news = {"text":[news]}
    new_def_test = pd.DataFrame(testing_news)
    new_def_test["text"] = new_def_test["text"].apply(wordopt)
    new_x_test = new_def_test["text"]
    new_xv_test = vectorization.transform(new_x_test)
    pred_LR = LR.predict(new_xv_test)
    pred_DT = DT.predict(new_xv_test)
    pred_GBC = GBC.predict(new_xv_test)
    pred_RFC = RFC.predict(new_xv_test)
```

```
        return print("\n\nLR Prediction: {} \nDT Prediction: {} \nGBC Prediction: {} \nRFC Prediction: {}".format(output_lable(pred_LR[0]),
output_lable(pred_DT[0]),
output_lable(pred_GBC[0]),
output_lable(pred_RFC[0])))



news = str(input())

manual_testing(news)
```

```
BRUSSELS (Reuters) - NATO allies on Tuesday welcomed President Donald Trump s decision to commit more forces to Afghanistan,
as part of a new U.S. strategy he said would require more troops and funding from America s partners. Having run for the Whi
te House last year on a pledge to withdraw swiftly from Afghanistan, Trump reversed course on Monday and promised a stepped-
up military campaign against  Taliban insurgents, saying:  Our troops will fight to win .  U.S. officials said he had signed
off on plans to send about 4,000 more U.S. troops to add to the roughly 8,400 now deployed in Afghanistan. But his speech di
d not define benchmarks for successfully ending the war that began with the U.S.-led invasion of Afghanistan in 2001, and wh
ich he acknowledged had required an  extraordinary sacrifice of blood and treasure .  We will ask our NATO allies and globa
l partners to support our new strategy, with additional troops and funding increases in line with our own. We are confident
they will,  Trump said. That comment signaled he would further increase pressure on U.S. partners who have already been jolt
ed by his repeated demands to step up their contributions to NATO and his description of the alliance as  obsolete  - even t
hough, since taking office, he has said this is no longer the case. NATO Secretary General Jens Stoltenberg said in a statem
ent:  NATO remains fully committed to Afghanistan and I am looking forward to discussing the way ahead with (Defense) Secret
ary (James) Mattis and our Allies and international partners.  NATO has 12,000 troops in Afghanistan, and 15 countries have
pledged more, Stoltenberg said. Britain, a leading NATO member, called the U.S. commitment  very welcome .  In my call with
Secretary Mattis yesterday we agreed that despite the challenges, we have to stay the course in Afghanistan to help build up
its fragile democracy and reduce the terrorist threat to the West,  Defence Secretary Michael Fallon said. Germany, which ha
s borne the brunt of Trump s criticism over  the scale of its defense spending, also welcomed the new U.S. plan.  Our contin
ued commitment is necessary on the path to stabilizing the country,  a government spokeswoman said. In June, European allies
had already pledged more troops but had not given details on numbers, waiting for the Trump administration to outline its st
rategy for the region.Nearly 16 years after the U.S.-led invasion - a response to the Sept. 11 attacks which were planned by
al Qaeda leader Osama bin Laden from Afghanistan - the country is still struggling with weak central government and a Taliba
n insurgency. Trump said he shared the frustration of the American people who were  weary of war without victory , but a has
ty withdrawal would create a vacuum for groups like Islamic State and al Qaeda to fill.


LR Prediction: Not A Fake News
DT Prediction: Not A Fake News
GBC Prediction: Not A Fake News
RFC Prediction: Not A Fake News
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news = str(input())

manual_testing(news)
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Vic Bishop Waking TimesOur reality is carefully constructed by powerful corporate, political and special interest sources in order to covertly sway public opinion. Blatant lies are often televised regarding terrorism, food, war, health, etc. They are fashioned to sway public opinion and condition viewers to accept what have become destructive societal norms.The practice of manipulating and controlling public opinion with distorted media messages has become so common that there is a whole industry formed around this. The entire role of this brainwashing industry is to figure out how to spin information to journalists, similar to the lobbying of government. It is never really clear just how much truth the journalists receive because the news industry has become complacent. The messages that it presents are shaped by corporate powers who often spend millions on advertising with the six conglomerates that own 90% of the media:General Electric (GE), News-Corp, Disney, Viacom, Time Warner, and CBS. Yet, these corporations function under many different brands, such as FOX, ABC, CNN, Comcast, Wall Street Journal, etc, giving people the perception of choice  As Tavistock s researchers showed, it was important that the victims of mass brainwashing not be aware that their environment was being controlled; there should thus be a vast number of sources for information, whose messages could be varied slightly, so as to mask the sense of external control. ~ Specialist of mass brainwashing, L. WolfeNew Brainwashing Tactic Called AstroturfWith alternative media on the rise, the propaganda machine continues to expand. Below is a video of Sharyl Attkisson, investigative reporter with CBS, during which she explains how  astroturf,  or fake grassroots movements, are used to spin information not only to influence journalists but to sway public opinion. Astroturf is a perversion of grassroots. Astroturf is when political, corporate or other special interests disguise themselves and publish blogs, start facebook and twitter accounts, publish ads, letters to the editor, or simply post comments online, to try to fool you into thinking an independent or grassroots movement is speaking. ~ Sharyl Attkisson, Investigative ReporterHow do you separate fact from fiction? Sharyl Attkisson finishes her talk with some insights on how to identify signs of propaganda and astroturfing  These methods are used to give people the impression that there is widespread support for an agenda, when, in reality, one may not exist. Astroturf tactics are also used to discredit or criticize those that disagree with certain agendas, using stereotypical names such as conspiracy theorist or quack. When in fact when someone dares to reveal the truth or questions the  official  story, it should spark a deeper curiosity and encourage further scrutiny of the information.This article (Journalist Reveals Tactics Brainwashing Industry Uses to Manipulate the Public) was originally created and published by Waking Times and is published here under a Creative Commons license with attribution to Vic Bishop and WakingTimes.com. It may be re-posted freely with proper attribution, author bio, and this copyright statement. READ MORE MSM PROPAGANDA NEWS AT: 21st Century Wire MSM Watch Files


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news = str(input())
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manual_testing(news)
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SAO PAULO (Reuters) - Cesar Mata Pires, the owner and co-founder of Brazilian engineering conglomerate OAS SA, one of the largest companies involved in Brazil s corruption scandal, died on Tuesday. He was 68. Mata Pires died of a heart attack while taking a morning walk in an upscale district of S o Paulo, where OAS is based, a person with direct knowledge of the matter said. Efforts to contact his family were unsuccessful. OAS declined to comment. The son of a wealthy cattle rancher in the northeastern state of Bahia, Mata Pires  links to politicians were central to the expansion of OAS, which became Brazil s No. 4 builder earlier this decade, people familiar with his career told Reuters last year. His big break came when he befriended Antonio Carlos Magalh es, a popular politician who was Bahia governor several times, and eventually married his daughter Ter eza. Brazilians joked that OAS stood for  Obras Arranjadas pelo Sogro  - or  Work Arranged by the Father-In-Law.  After yea rs of steady growth triggered by a flurry of massive government contracts, OAS was ensnared in Operation Car Wash which unearthed an illegal contracting ring between state firms and builders. The ensuing scandal helped topple former Brazilian President Dilma Rousseff last year. Trained as an engineer, Mata Pires founded OAS with two colleagues in 1976 to do sub-contracting work for larger rival Odebrecht SA - the biggest of the builders involved in the probe.  Before the scandal, Forbes magazine estimated Mata Pires  fortune at $1.6 billion. He dropped off the magazine s billionaire list in 2015, months after OAS sought bankruptcy protection after the Car Wash scandal. While Mata Pires was never accused of wrongdoing in the investigations, creditors demanded he and his family stay away from the builder s day-to-day operations, people directly involved in the negotiations told Reuters at the time. He is survived by his wife and his two sons.


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4. INFERENCE, RESULT AND CONCLUSION

We have used two datasets for experimenting the machine learning models to find fake news. In this experiment we verified the accuracies of Logistic Regression, Random Forest, Decision tree and Gradient Boosting Classifier. Experiments result in Decision Tree and Gradient Boosting Classifiers better performed compared to remaining models.

As mentioned earlier, the concept of deception detection in social media is particularly new and there is ongoing research in hopes that scholars can find more accurate ways to detect false information in this booming, fake-news-infested domain. For this reason, this research may be used to help other researchers discover which combination of methods should be used in order to accurately detect fake news in social media. The proposed method described in this paper is an idea for a more accurate fake news detection algorithm.

In the future, We wish to improvise out the current existing model analysis, but, due to limited knowledge and time, this will be a project for the future. It is important that we have some mechanism for detecting fake news, or at the very least, an awareness that not everything we read on social media may be true, so we always need to be thinking critically. This way we can help people make more informed decisions and they will not be fooled into thinking what others want to manipulate them into believing.

Future work :

- We can modify our project to gather data from various sites and filter out the common data and label it as true or false using some algorithm.

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