Fake News Analysis In Social Media Using IBM Watson

1 INTRODUCTION

 Now day's fake news is creating different issues from sarcastic articles to a fabricated news and plan government propaganda in some outlets. Fake news and lack of trust in the media are growing problems with huge ramifications in our society. Obviously, a purposely misleading story is "fake news " but lately blathering social media's discourse is changing its definition. Some of them now use the term to dismiss the facts counter to their preferred viewpoints.

The importance of disinformation within American political discourse was the subject of weighty attention , particularly following the American president election . The term 'fake news' became common parlance for the issue, particularly to describe factually incorrect and misleading articles published mostly for the purpose of making money through page views. In this paper,it is seeked to produce a model that can accurately predict the likelihood that a given article is fake news.

Facebook has been at the epicenter of much critique following media attention. They have already implemented a feature to flag fake news on the site when a user sees's it ; they have also said publicly they are working on to to distinguish these articles *in* an automated way. Certainly, it is not an easy task. A given algorithm must be politically unbiased – since fake news exists on both ends of the spectrum – and also give equal balance to legitimate news sources on either end of the spectrum. In addition, the question of legitimacy is a difficult one.However, in order to solve this problem, it is necessary to have an understanding on what Fake News is. Later, it is needed to look into how the techniques in the fields of machine learning, natural language processing help us to detect fake news.

1.1 Overview

This Machine Learning project is used to forecast the information whether it is fake or not based on the input given by the user.

1.2 Purpose

we have built a classifier model that can identify news as real or fake. For this purpose, we have used data from Kaggle, but you can use any data to build this model following the same methods. With the help of this project you can create an NLP classifier to detect whether the news is real or fake.

2. LITERATURE SURVEY

2.1 Introduction

Our project is an web application which gives you the guidance of the day to day rountine of fake news, spam message in daily news chanel , Facebook, Twitter, Instagram and other social media.We have shown some data analysis from our dataset which have retrive from many online social media and display the main source till now fake news and true news are engaged. Our project is tangled with multiple model trained by our own and also some pretrained model extracted from Felipe Adachi. The accuracy of the model is around 95% for all the selfmade model and 97% for this pretrained model. This model can detect all news and message which are related to covid-19,political news, geology ,etc.

2.2 Existing System

We can get online news from different sources like social media websites, search engine, homepage of news agency websites or the factchecking websites. On the

Internet, there are a few publicly available datasets for Fake news classification like Buzzfeed News, LIAR [15], BS Detector etc. These datasets have been widely used in different research papers for determining the veracity of news. In the following sections, I have discussed in brief about the sources of the dataset used in this work.This Existing system can help us to trained our model using machine learning technique.

2.3 Proposed solution

The system is an Web application which help user to detect the fake news. We have given the text box where the user has the option to paste the message or paste the url link of the news and other message link and after that it gives the reality of it. All the user gives data to detector may save for further use in order to update the statue of model, data analysis in future. We also help user by giving some guidance of how to prevent from such false event and how to stop with such event from spreading it.

3 THEORITICAL ANALYSIS

3.1 Block diagram
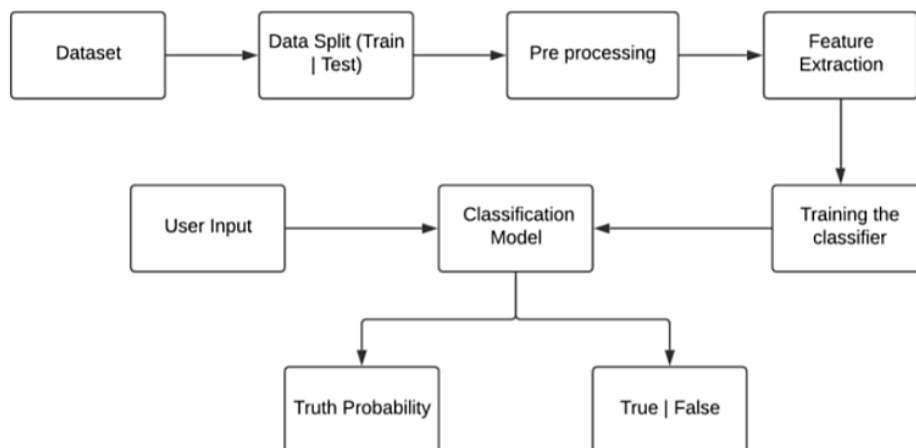
3.2 Hardware / Software designing
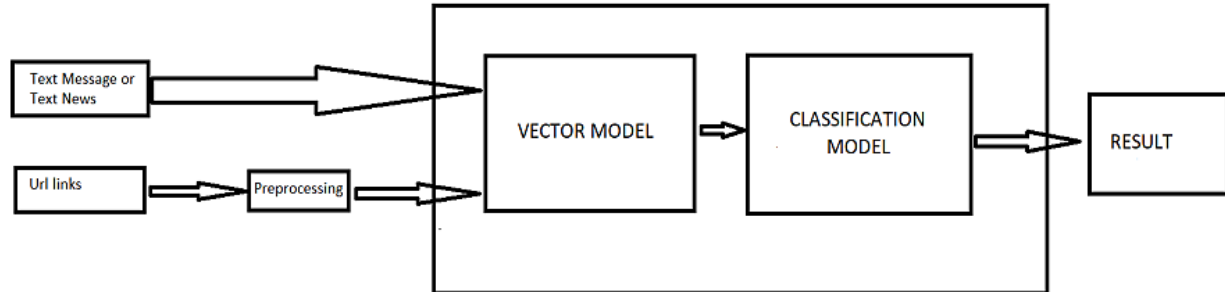
4 EXPERIMENTAL INVESTIGATIONS

An effective strategy for learning any new skill is to define it and break it down into logical steps, establishing a progression that can be followed and repeated to reach the desired results. The process of investigation is no exception and can be effectively explained and learned in this manner.
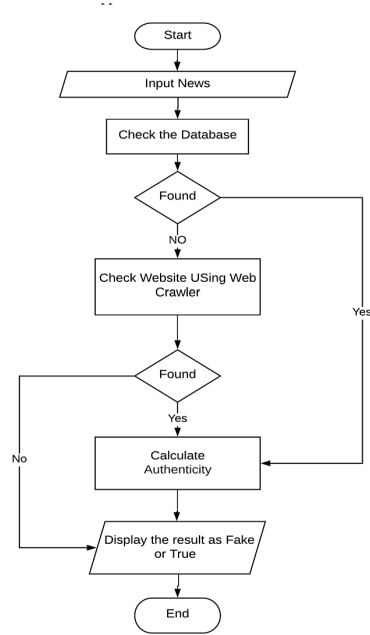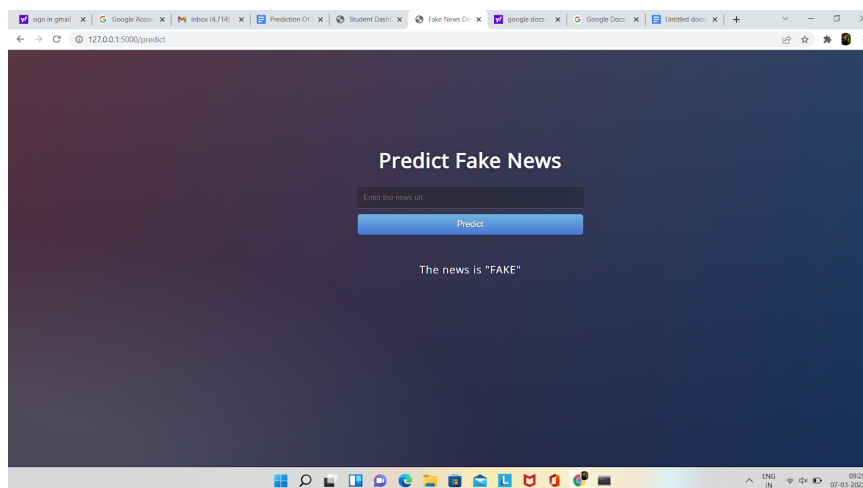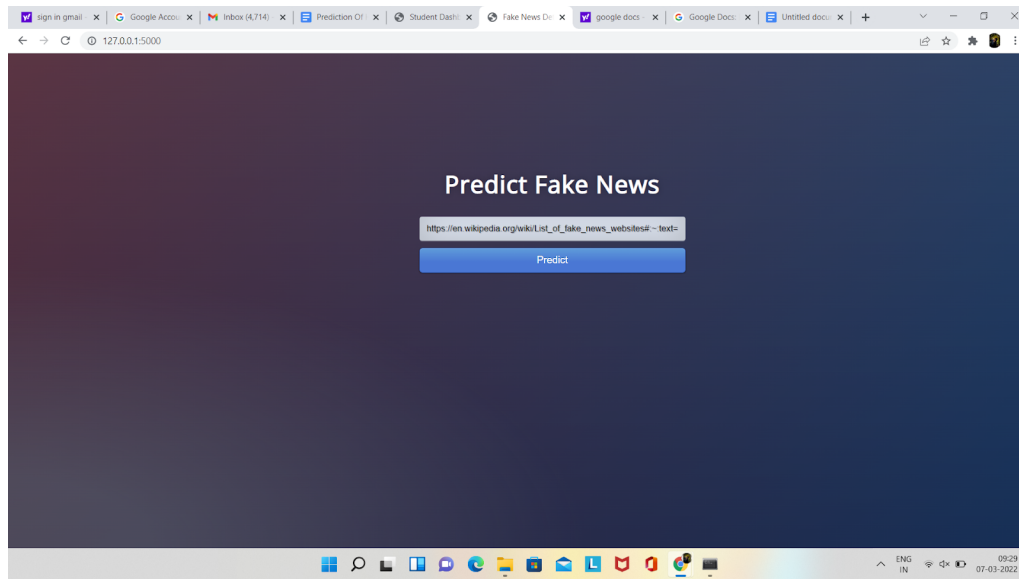
5 Flowchart

Fig. 2: Flow Chart.

6 Result

This is the main page of Fake News Detection where we give the URL as input and predict the output.

- Input the URL & predict the result.

- Paste the URL of the article and click to predict the output whether it is Fake or Real.

7 Advantages and disadvantages

7.1 Advantages

Apart from the pandemic, hundreds of incidents where people or political groups used fabricated information or altered data to misinform people. Obviously, for self-interests. It's time to know can

fake news be of any benefit; if yes, then who?

1. Advertisers take the Advantages of Fake News

Digital News Media is the cheapest and easiest way to get in touch with the users and deliver information. So, that's how it goes; a fake new website display draws the reader's attention and makes money whenever users click an ad.

The websites partner with ad providers, giving them commissions based on how many viewers you manage to get through fake news. The biggest reason why readers love to read fake news is it's compelling and arouses curiosity among users.

2. Influencers also take benefits of Fake News

Influencers with millions of fan following get money from their sponsors Social media influencers need daily content to draw their followers' attention. Especially those who don't have special talent but republish the content or misrepresent the reality to grab public attention are the ones who benefit from fake news.

TikTok Video App is a better example of what many users do by scripting the real scenario and fooling the viewers. Many others spread false information through YouTube to influence the public and show they are the experts.

3. Political Warfare

The majority of the conversation these days revolves around its role in political campaigns and influencing civilians views' on political parties. Today, fundamentalist violent extremist organizations have utilized social media to gather support for their groups by posting videos and articles of their actions online for the public to see.

Incidents like riots or videos that incite communal disharmony are trends that easily get millions of views within minutes. The rest is done by the political leaders who look for such information to blame the opposition. Most political parties take the advantages of fake news during elections.

4. Fun and Entertainment

Many individuals use fake news in the form of satire or parody to have fun and get attention from their friends. Everyone loves to see funny stuff online, and most of the content you'll find on the internet is either fabricated or twisted to make it more entertaining for viewers.

The actor uses doctored images to manipulate users and let them believe the content is original and genuine. People sharing links of money-making apps encouraging other group members to follow the same is another example of manipulating.

7.2 What are the Disadvantages of Fake News?

There are many cons of fake news, which can escalate further at a wider level if not tackled on time. From a personal level to global, these Disadvantages of Fake News can affect social or economic harmony.

1. Change in Public Opinion

As said before, many political groups in the opposition divert the public's attention from the main agenda using manipulated news. This is done especially to change public opinion about the ruling party and gain public support.

Incidents like cracking scams or finding flaws in the opposition's system are common examples of changing public opinion.

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False Perception

When an influential person says it, people tend to believe it. Developing a false perception about someone is one major disadvantage of fake news. Whenever a strong personality with millions of fans misinforms people about an incident, they would believe it blindly.

People would either change their perception about the person being talked about and will be misled by the false information without digging down facts on their own. The main motive of the actor is to frame an issue or an individual by misleading the public.

8 APPLICATION

Currently, many people are using the internet as a central platform to find the information about reality in world and need to be continue.Hence I has mention above we will create fake news and message detection model which detect the reality of the news and message.

9 CONCLUSION

In the 21st century, the majority of the tasks are done online. Newspapers that were earlier preferred as hard- copies are now being substituted by applications like Facebook, Twitter, and news articles to be read online. Whatsapps forwards are also a major source. The growing problem of fake news only makes things more complicated and tries to change or hamper the opinion and attitude of people towards use of digital technology. When a person is deceived by the real news two possible things happen- People start

believing that their perceptions about a particular topic are true as assumed. Thus, in order to curb the phenomenon, we have developed our" **Fake news Analysis**" system that takes input from the user and classify it to be true or fake. To implement this, various NLP and Machine Learning Techniques have to be used. The model is trained using an appropriate dataset and performance evaluation is also done using various performance measures. The best model, i.e. the model with highest accuracy is used to classify the news headlines.

10 FUTURE SCOPE

This project **"FAKE NEWS ANALYSIS"** can be further enhanced to provide greater flexibility and performance with certain modification whenever necessary. Deep fake learning which can be help to detect fake image . Deep learning machine learning to get more accurate result.

11 BIBILOGRAPHY

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12 APPENDIX

PROGRAM CODE

```
#Importing the Libraries
#flask is use for run the web application.
import flask
```

```python
#import newspaper3k
#request is use for accessing file which was uploaded by the user on our application.
from flask import Flask, request,render_template
from flask_cors import CORS

#Python pickle module is used for serializing
# and de-serializing a Python object structure.
import pickle
import requests

# NOTE: you must manually set API_KEY below using information retrieved from your
IBM Cloud account.
API_KEY = "UqKC_K9ox9COEdiL0JxjLV-fr5T0qVXA0FX6b1KmQOD4"
token_response = requests.post('https://iam.cloud.ibm.com/identity/token',
data={"apikey": API_KEY, "grant_type": 'urn:ibm:params:oauth:grant-type:apikey'})
mltoken = token_response.json()["access_token"]

header = {'Content-Type': 'application/json', 'Authorization': 'Bearer ' + mltoken}

# NOTE: manually define and pass the array(s) of values to be scored in the next line
#payload_scoring = {"input_data": [{"fields": [array_of_input_fields], "values":
[array_of_values_to_be_scored, another_array_of_values_to_be_scored]}]}

#response_scoring = requests.post('https://eu-
gb.ml.cloud.ibm.com/ml/v4/deployments/2645d777-d20d-442e-bdd4-
a51ac7783587/predictions?version=2022-03-07', json=payload_scoring,
headers={'Authorization': 'Bearer ' + mltoken})
#print("Scoring response")
#print(response_scoring.json())

#OS module in python provides functions for interacting with the operating system
import os

#Newspaper is used for extracting and parsing newspaper articles.
#For extracting all the useful text from a website.
from newspaper import Article
#import Article
```

```python
#URLlib is use for the urlopen function and is able to fetch URLs.
#This module helps to define functions and classes to open URLs
import urllib

#Loading Flask and assigning the model variable
app = Flask(__name__)
CORS(app)
app=flask.Flask(__name__,template_folder='templates')

with open('model.pkl', 'rb') as handle:
    model = pickle.load(handle)
#@app.route('/') # rendering the html template
#def home():
  #  return render_template("home.html")
#@app.route('/predict') # rendering the html template
#def main() :
  #  return render_template("main.html")
@app.route('/') #default route
def main():
    return render_template('main.html')

#Receiving the input url from the user and using Web Scrapping to extract the news
content

#Route for prediction

@app.route('/predict',methods=['GET','POST'])


def predict():
        #Contains the incoming request data as string in case.
    url =request.get_data(as_text=True)[5:]

        #The URL parsing functions focus on splitting a URL string into its components,
        #or on combining URL components into a URL string.
    url = urllib.parse.unquote(url)
```

```python
        #A new article come from Url and convert onto string
article = Article(str(url))

        #To download the article
article.download()

        #To parse the article
article.parse()

        #To perform natural language processing ie..nlp
#article.nlp()
        #To extract summary
news = article.summary
print(type(news))

#Passing the news article to the model and returing whether it is Fake or Real
pred = model.predict([news])
print(pred)
return render_template('main.html', prediction_text='The news is "{}"'.format(pred[0]))

if __name__=="__main__":
    port=int(os.environ.get('PORT',5000))
    app.run(port=port,debug=True,use_reloader=False)
```