

A MAJOR PROJECT REPORT

ON

FAKE NEWS DETECTION

Submitted in partial fulfillment of the Requirements for the award of degree of

Bachelor of Technology

In

Computer Science And Engineering

By

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(Formerly CVSR College of Engineering)

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CERTIFICATE

This is to certify that the project entitled “**FAKE NEWS DETECTION**” being submitted by **CH SAI KIRAN** bearing the Hall Ticket number **17H61A0506**, **K SAI DIVYA TEJA** bearing the Hall Ticket number **17H61A0523** and **M DINESH** bearing the Hall Ticket number **18H65A0504** in partial fulfillment of the requirements for the award of the degree of the **Bachelor of Technology in Computer Science and Engineering** to **Anurag Group of Institutions (Formerly CVSR College of Engineering)** is a record of bonafide work carried out by them under my guidance and supervision from November 2020 to March 2021.

The results presented in this project have been verified and found to be satisfactory. The results embodied in this project report have not been submitted to any other University for the award of any other degree or diploma.

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DECLARATION

We hereby declare that the project work entitled “**FAKE NEWS DETECTION**” submitted to the **Anurag Group of Institutions(Formerly CVSR College of Engineering)** in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology (B.Tech) in Computer Science and Engineering** is a record of an original work done by us under the guidance of **Mr. P RAJA SEKHAR REDDY, Associate Professor** and this project work have not been submitted to any other university for the award of any other degree or diploma.

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Date:

ABSTRACT

In our modern era where the internet is ubiquitous, everyone relies on various online resources for news. Along with the increase in the use of social media platforms like WhatsApp groups, Facebook Pages, Twitter and other micro blogs & social networking sites. News spread rapidly among millions of users within a very short span of time. The spread of fake news has far-reaching consequences like the creation of biased opinions. Moreover, spammers use appealing news headlines to generate revenue using advertisements via click-baits. One of the unique challenges for fake news detection on social media is how to identify fake news on newly emerged events. Unfortunately, most of the existing approaches can hardly handle this challenge, since they tend to learn event-specific features that can not be transferred to unseen events. This paper demonstrates a model and the methodology for fake news detection. With the help of Machine learning, Artificial Intelligence, we tried to aggregate the news and later determine whether the news is real or fake using Passive Aggressive Classification. Tfidfvectorizer was implemented in the model which will tokenize the text into vectors based on the frequency of the words in the text. These vectors will help the model to predict the news accurately. We also included a Logistic regression model in order to compare with the results of Passive Aggressive Classifier. The Passive Aggressive Classifier provides the best results compared to other models.

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1. INTRODUCTION

How much of what we read on social media and supposedly “credible” news sites is trustworthy? It is extremely easy for anyone to post what they desire and although that can be acceptable, there is the notion of taking it a step too far, such as posting false information online in order to cause a panic, using lies to manipulate another person’s decision, or essentially anything else that can have lasting repercussions. There is so much information online that it is becoming impossible to decipher the true from the false. Thus, this leads to the problem of fake news

1.1. MOTIVATION

In recent years research has shown that false news spreads faster on social media than real news. An MIT report discovered that falsehoods are 70% more likely to be retweeted on Twitter than facts, and true news stories take up to six times longer to reach people. Social media has impacted our lives in a significant way, and whilst some of its advances have helped us for the better, it seems that platforms’ inability to fact check and their users’ rights to free speech and communication have created a melting pot of incorrect or inaccurate information. So, our aim is to develop a machine learning algorithm which can detect fake news on social media.

1.2. PROBLEM DEFINITION

Fake news has existed for a very long time, nearly the same amount of time as news began to circulate widely after the printing press was invented in 1439. However, there is no agreed definition of the term “fake news”. Therefore, we first discuss and compare some widely used definitions of fake news in the existing literature, and provide our definition of fake news that will be used for the remainder of this survey. A narrow definition of fake news is news articles that are intentionally and verifiably false and could mislead readers. There are two key features of this definition: authenticity and intent. First, fake news includes false information that can be verified as such. Second, fake news is created with dishonest intention to mislead consumers. Broader definitions of fake news focus on the either authenticity or intent of the news content.

1.3. OBJECTIVES OF THE PROJECT

The objectives of the project can be described as:

- To build a machine learning model that classifies whether a news is fake or not.
- To attain more accurate results than the existing models.
- To provide a system that can detect the Fake News on social media.
- To provide a system which does not require any installation and usage of expensive hardware and software requirements.

2.LITERATURE SURVEY

A look at contemporary scholarly work shows that the issue of fake news has been a major concern amongst scholars from various backgrounds. For instance, some authors have observed that fake news is no longer a preserve of the marketing and public relations departments . Instead, the problem is increasingly being regarded as part of the responsibilities associated with the information technology (IT) department. Traditionally, it was believed that the two departments mentioned above were the ones to deal with any implications arising from the dissemination of misleading news related to an organization. However, current research indicates that fake news is considered to be a threat to information security. The involvement of the IT department, therefore, is premised on the idea that it would help avert the various risks associated with the problem. Similarly, other authors have noted that the participation of IT professionals in resolving matters concerning fake news is paramount considering the demands of the contemporary corporate environment . Rather than as it was the case a few years ago when perpetrators of such gimmicks were motivated by just attracting web traffic, the practice has evolved into a matter that includes the involvement of hackers. Specifically, some content publishers have resorted to including material that contains malicious code as part of the content provided on their web pages, leading those who visit such sites to click the links and download the malware without their knowledge. Such developments, according to the scholars, have exposed modern companies to further risk of cyber intrusion as the perpetrators of the fake news tend to target employees of certain organizations with the aim of exploiting the latter's curiosity .

Fake news negatively affects individuals, but it is also harmful to society in the long run. With all this false information floating around, fake news is capable of ruining the "balance of the news ecosystem". For instance, in the 2016 Presidential Election, the most popular fake news was even more widely spread on Facebook instead of the most popular authentic mainstream news. This demonstrates how users may pay more attention to manipulated information than authentic facts. This is a problem not only because fake news persuades consumers to accept biased or false beliefs in order to communicate a manipulator's agenda and gain influence, but also fake news changes how consumers react to real news. People who engage in information manipulation desire to cause confusion so that a person's ability to decipher the true from the false is further impeded. This, along with influence, political agendas, and manipulation, is one of the many motives why fake news is generated.

3.ANALYSIS

3.1. EXISTING SYSTEMS

There were many existing approaches to detect fake news like

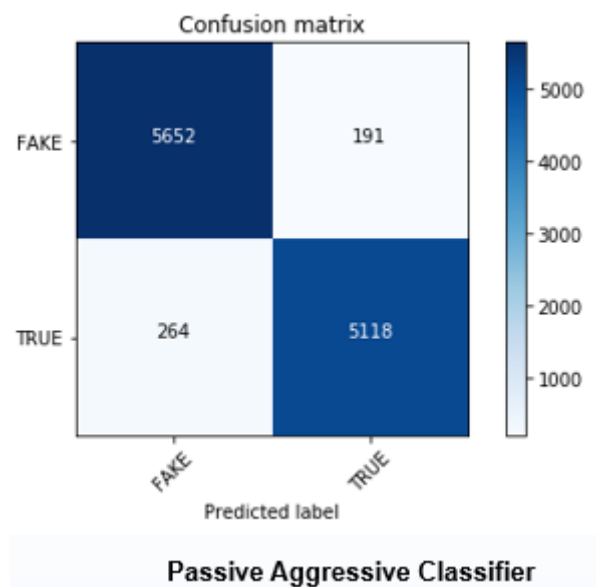
1. Classification using Logistic Regression.
2. Classification using Naive Bayes algorithm

3.1.1. DRAWBACKS OF EXISTING SYSTEMS

- High computational cost.
- These Algorithms are less efficient.
- Predictions made by them are also not accurate.

3.2.PROPOSED SYSTEM

The proposed work focuses on the development of a model using Passive Aggressive Classifier. Passive-Aggressive algorithms are generally used for large-scale learning. It is one of the few online-learning algorithms. An online-learning algorithm will get a training example, update the classifier, and then throw away the example. In Passive, If the prediction is correct, keep the model and do not make any changes. In Aggressive, If the prediction is incorrect, it make changes to the model.



3.2.1.ADVANTAGES OF PROPOSED SYSTEM

- Its purpose is to make updates that correct the loss, causing very little change in the norm of the weight vector.
- Proposed system provides greater accuracy compared to existing systems
- Do not require any additional softwares to run
- It is cost effective.
- It produces fast results when compared to existing systems.

3.3.SOFTWARE REQUIREMENT SPECIFICATION

- Programming Language: Python 3
- Packages: Pandas, Numpy, Sklearn
- IDE editor: Jupyter Notebook
- RAM required: 8GB

3.3.1.PURPOSE

The purpose of this system is to identify the Fake News on social media as it has recently become an emerging research that is attracting tremendous attention. Fake news detection on social media presents unique characteristics and challenges that make existing detection algorithms from traditional news media ineffective or not applicable.

3.3.2.SCOPE

The proposed system detects the fake news on social media using the Passive-Aggressive algorithm which fails in some cases by applying other algorithms. The results conducted to assess the method's ability to attain its intended objective, showed outstanding performance in identifying possible sources of fake news.

3.3.3.OVERALL DESCRIPTION

With the increasing popularity of social media, more and more people consume news from social media instead of traditional news media. However, social media has also been used to spread fake news, which has strong negative impacts on individual users and broader society. Here, to get more accurate results we used a passive aggressive algorithm. We trained our model using some fake and true datasets. After these pre-processing stages, the algorithm utilizes a highly powerful concept of Passive Aggressive Classification to classify the data. This model can generate high accurate results.

4. DESIGN

4.1. UML DIAGRAM

4.1.1. Use case Diagram

A use case diagram in the Unified Modeling Language (UML) is a type of behavioral diagram defined by and created from a Use-case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals (represented as use cases), and any dependencies between those use cases. The main purpose of a use case diagram is to show what system functions are performed for which actor.

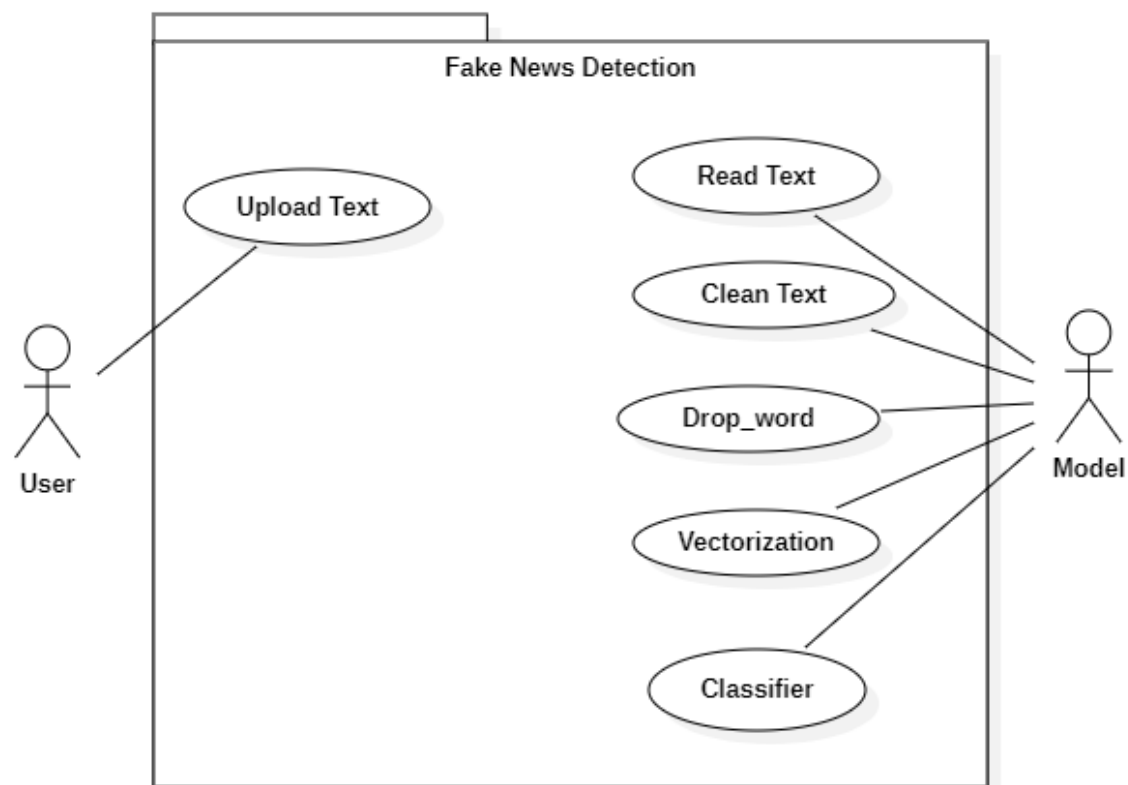


Fig 4.1.1 Use Case Diagram for the proposed system

4.1.2. Class Diagram

The class diagram is the main building block of object-oriented modeling. It is used for general conceptual modeling of the structure of the application, and detailed modeling translating the models into programming code. Class diagrams can also be used for data modeling.

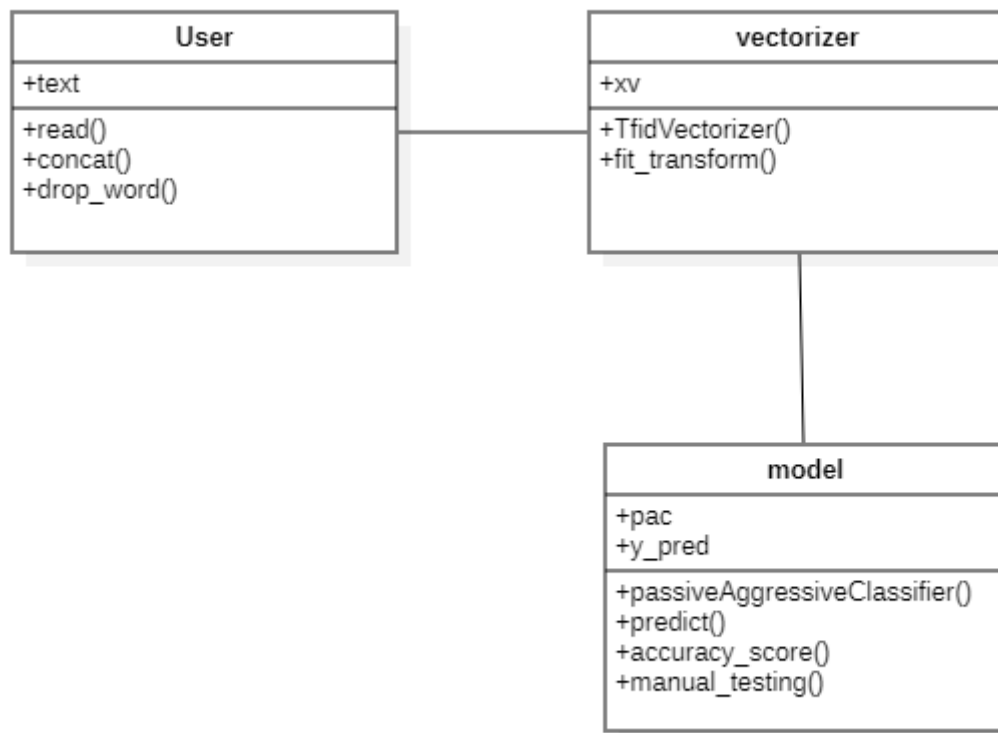


Fig 4.1.2. Class Diagram for the proposed system

4.1.3. Activity Diagram

The activity diagram is another important diagram in UML to describe the dynamic aspects of the system. An activity diagram is a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all types of flow control by using different elements such as fork, join, etc. The basic purpose of activity diagrams is similar to the other four diagrams. It captures the dynamic behavior of the system.

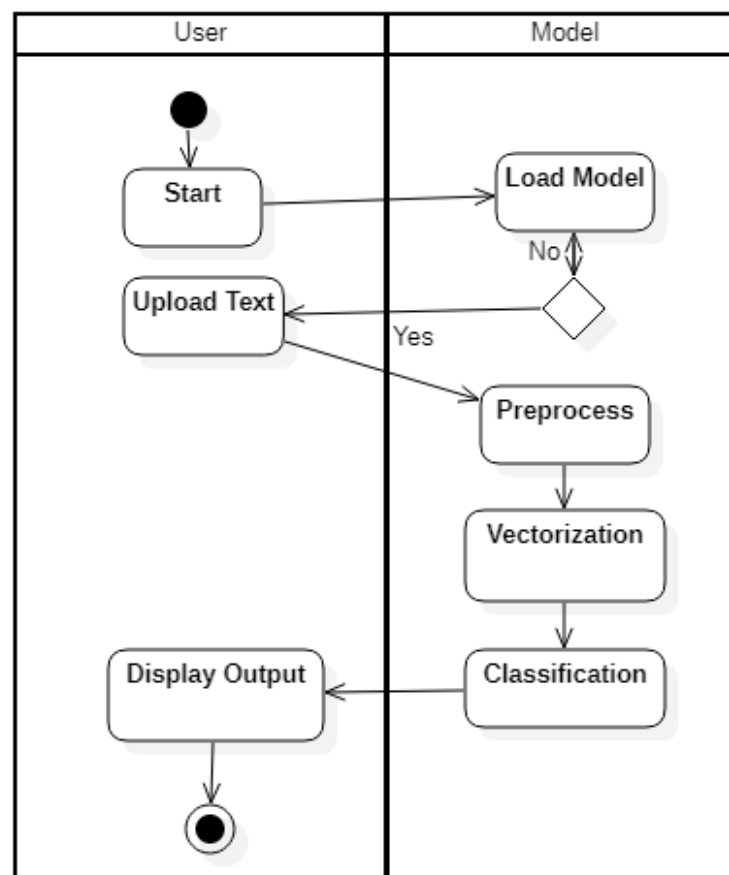


Fig 4.1.3. Activity Diagram for the proposed system

4.1.4. Sequence Diagram

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. Sequence diagrams are sometimes called event diagrams, event scenarios, and timing diagrams.

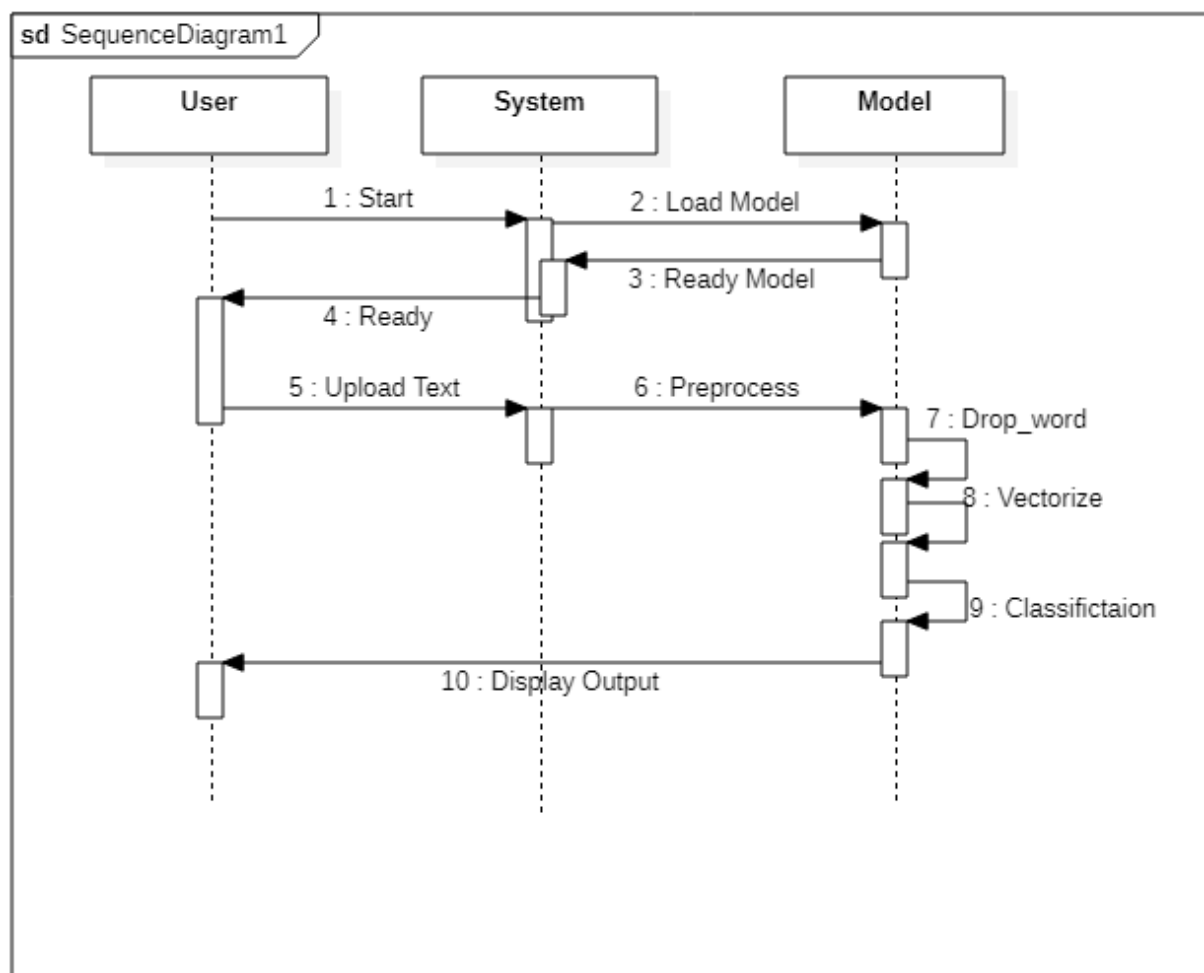


Fig 4.1.4 Sequence Diagram for the proposed system

5. IMPLEMENTATION

5.1. MODULES

- User
- Numpy
- Pandas
- Sklearn
- String
- Regular expression

5.2. MODULE DESCRIPTION

5.2.1. User

- Uploads text to the model.

5.2.2. Numpy

NumPy is a library for the Python programming language, adding support for large, multi-dimensional arrays and matrices, along with a large collection of high-level mathematical functions to operate on these arrays. The ancestor of NumPy, Numeric, was originally created by Jim Hugunin with contributions from several other developers. In 2005, Travis Oliphant created NumPy by incorporating features of the competing Numarray into Numeric, with extensive modifications. NumPy is open-source software and has many contributors

5.2.3. Pandas

Pandas is one of the tools in Machine Learning which is used for data cleaning and analysis. It has features which are used for exploring, cleaning, transforming and visualizing fromPandas is an open-source python package built on top of Numpy developed by Wes McKinney. It is used as one of the most important data cleaning and analysis tools. It

provides fast, flexible, and expressive data structures. Pandas is derived from the term “Panel-data-s” an econometrics term for data sets including observations over multiple time periods for the same individuals.

5.2.4. Sklearn

Scikit-learn is a free machine learning library for Python. It features various algorithms like support vector machine, random forests, and k-neighbours, and it also supports Python numerical and scientific libraries like NumPy and SciPy. In this tutorial we will learn to code python and apply Machine Learning with the help of the scikit-learn library, which was created to make doing machine learning in Python easier and more robust. To do this, we'll be using the Sales_Win_Loss data set from IBM's Watson repository. We will import the data set using pandas, explore the data using pandas methods like head(), tail(), dtypes(), and then try our hand at using plotting techniques from Seaborn to visualize our data. Then we'll dive into scikit-learn and use preprocessing.LabelEncoder() in scikit-learn to process the data, and train_test_split() to split the data set into test and train samples. We will also use a cheat sheet to help us decide which algorithms to use for the data set. Finally we will use three different algorithms (Naive-Bayes, LinearSVC, K-Neighbors Classifier) to make predictions and compare their performance using methods like accuracy_score() provided by the scikit-learn library. We will also visualize the performance score of different models using scikit-learn and Yellowbrick visualization.

5.2.5. String

In other sklearn models, you can declare it once and then use it to fit and then transform on a number of columns. In LabelEncoding, you have to fit_transform the model on one column in train data and then transform the same column in test data. Then the same process for the next categorical column. The next classification is one of the most important tasks in Natural Language Processing. It is the process of classifying text strings or documents into different categories, depending upon the contents of the strings. In LabelEncoding, you have to fit_transform the model on one column in train data and then transform the same column in test data. Then the same process for the next categorical column. Split - breaking up longer strings of data into shorter strings based on a specified character. Upper / Lower - Will change every alphabetic character into either an upper or lower case letter. Mid - takes the next specified characters from a certain position in a string.

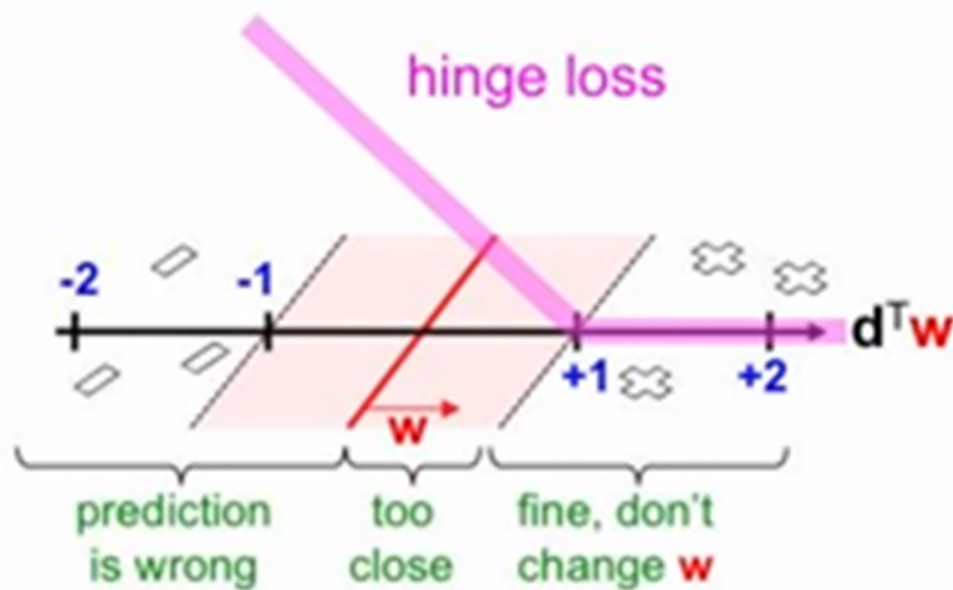
5.2.6. Regular expression

A regular expression (shortened as regex or regexp; also referred to as rational expression) is a sequence of characters that specifies a search pattern. Usually such patterns are used by string-searching algorithms for "find" or "find and replace" operations on strings, or for input validation. So let's start by defining regular expressions: A regular expression is a sequence of characters that define a search pattern. A regular expression is a special sequence of characters that helps you match or find other strings or sets of strings, using a specialized syntax held in a pattern. To avoid any confusion while dealing with regular expressions, we would use Raw Strings as expression'

5.3. INTRODUCTION TO TECHNOLOGY USED

5.3.1. Passive Aggressive Classifier

In machine learning, Passive Aggressive classifier is one of the online learning algorithms where you train a system incrementally by feeding it instances sequentially, individually or in small groups. In online learning, a machine learning model is trained and deployed in production in a way that continues to learn as new data sets arrive. So we can say that an algorithm like Passive Aggressive Classifier is best for systems that receive data in a continuous stream. In simple terms, it remains passive for correct predictions and responds aggressively to incorrect prediction.



5.4.SAMPLE CODE

```
import pandas as pd

import numpy as np

from sklearn.model_selection import train_test_split

from sklearn.metrics import classification_report

import re

import string

d_fake=pd.read_csv("Fake.csv")

d_true=pd.read_csv("True.csv")

d_fake.tail(10)

d_true.head(15)

d_fake["class"]=1

d_true["class"]=0

d_fake.shape,d_true.shape

d_fake_test=d_fake.tail(10)

for i in range(10):

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

d_true_test=d_true.tail(10)

for i in range(10):

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

d_test=pd.concat([d_fake_test,d_true_test],axis=0)

d_test.to_csv("Test.csv")

d_merge=pd.concat([d_fake,d_true],axis=0)

d_merge.head(10)

d=d_merge.drop(["title","subject","date"],axis=1)

d.head(10)
```

```

d=d.sample(frac=1)

d.head(10)

d.isnull().sum()

def drop_word(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

d["text"]=d["text"].apply(drop_word)

d.head(10)

x=d["text"]

y=d["class"]

x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=.30)

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)

Lr.score(xv_test,y_test)

pred_Lr =Lr.predict(xv_test)

```

```

print(classification_report(y_test,pred_Lr))

from sklearn.linear_model import PassiveAggressiveClassifier

from sklearn.metrics import accuracy_score, confusion_matrix

pac=PassiveAggressiveClassifier(max_iter=50)

pac.fit(xv_train,y_train)

y_pred=pac.predict(xv_test)

score=accuracy_score(y_test,y_pred)

print(f Accuracy: {round(score*100,2)}%')

print(f'Classification Report : \n\n{classification_report(y_test, y_pred)}')

def output_label(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(drop_word)

    new_x_test = new_def_test["text"]

    new_xv_test = vectorization.transform(new_x_test)

    pred_Lr = Lr.predict(new_xv_test)

    pred_pac = pac.predict(new_xv_test)

    return print("\n\nLR Prediction: {} \nPAC Prediction: {}
".format(output_label(pred_Lr[0]), output_label(pred_pac[0])))

news = str(input())

manual_testing(news)

```

6. TEST CASES

S.NO	Input	Output
1	<p>New Delhi: A deluge of online hoaxes that hit Indian social media as the country fought aerial battles with neighbouring Pakistan has heightened fears over the “fake news” war looming in India’s national election.</p> <p>AFP has published more than 30 fact-check blogs debunking false claims made on Facebook and other social networks about the stand-off over Kashmir between the nuclear-armed neighbours.</p> <p>Experts said it was just the tip of the iceberg and that India will be a misinformation challenge among a host of closely-watched elections around the world this year.</p>	Not a fake news
2	<p>WASHINGTON (Reuters) - The head of a conservative Republican faction in the U.S. Congress, who voted this month for a huge expansion of the national debt to pay for tax cuts, called himself a “fiscal conservative” on Sunday and urged budget restraint in 2018. In keeping with a sharp pivot underway among Republicans, U.S. Representative Mark Meadows, speaking on CBS’s “Face the Nation,” drew a hard line on federal spending, which lawmakers are bracing to do battle over in January.</p>	Fake news

1.User will give the text to the model, which will be the input to the model.

2.After classifying the text will be the output to the user.

7. SCREENSHOTS OF OUTPUT

```
In [30]: news = str(input())  
manual_testing(news)
```

According to the BBC, many of the fake news websites were being run by an Indian company called the Srivastava Group, which was responsible for anti-Pakistan lobbying efforts in Europe and was persistently linked to the dissemination of fake news and propaganda.[60][55] The websites, which are known to copy syndicated news content from other media outlets in order to appear as real news websites, plant opinion pieces and stories critical of Pakistan from individuals who belong to NGOs linked to their network.[60] The network attempts to influence decision-making organisations such as the UN Human Rights Council and European Parliament, where its primary aim is to "discredit Pakistan".[55] In October 2019, the network sponsored a controversial trip of a group of far-right European Parliament MPs to Indian-administered Kashmir, during which they also met prime minister Narendra Modi.[60] Domains operated by the group included the "Manchester Times", "Times of Los Angeles", "Times of Geneva" and "New Delhi Times" among others.[60] A common theme of their coverage tends to be on issues such as secessionist groups, minorities, human rights cases and terrorism in Pakistan.[60][61][62] The EU Chronicle, a Srivastava Group website which claimed to deliver news from the European Union, was found to have op-ed articles "falsely attributed to their authors, some of them European lawmakers", journalists who seemed to not exist, text plagiarised from other sources, and content mostly focused on Pakistan.[61] EPToday, another news website which highlighted anti-Pakistan material, was forced to shut down after it was similarly exposed according to Politico Europe.[61] As part of its efforts to project Indian lobbying interests, the network had resurrected fake personas of dead human rights activists and journalists, impersonated regular media agencies such as The Economist and Voice of America, used European Parliament letterheads, listed fake phone numbers and addresses including that of the UN on its websites, created obscure book publishing companies and public personalities, registered hundreds of fake NGOs, think tanks, informal groups and imam organisations, as well as conducted cybersquatting on Pakistani domains.[62] Most of the websites had a presence on social media such as Twitter.[62] It was also noted that following EU DisinfoLab's first report in 2019, some domains had closed only to be resurrected under different names later.[62] Researchers state that the main target of the fake websites' content is not readers in Europe, but rather mainstream Indian news outlets such as ANI[55] and Yahoo News India[62] who routinely reuse and republish their material and act as their conduit to hundreds of millions in India.

LR Prediction: Fake News
PAC Prediction: Not A Fake News

```
In [29]: news = str(input())  
manual_testing(news)
```

A study by the EU DisinfoLab in 2019 found that at least "265 fake local news websites in more than 65 countries are managed by Indian influence networks with the aim of influencing international institutions along with elected representatives and swaying the public perception of Pakistan." [54] By 2020, the number of such pro-India fake news websites was revealed to have grown to 750 across 116 countries in an investigation titled the Indian Chronicles.[55] Prominent examples of fake news-spreading websites and online resources include OpIndia[56][57] and Postcard News.

LR Prediction: Not A Fake News
PAC Prediction: Not A Fake News

8. CONCLUSION

In this project, we have implemented a fake news detection algorithm. We trained our model using some fake and true datasets. After the preprocessing stages, the algorithm utilizes a highly powerful concept of Passive Aggressive Classification to classify the data. This model can generate high accurate results. This model can also be used to classify huge amounts of data because the model does not store any information ,it only learns from the prediction and removes the text from the storage.

9. FUTURE ENHANCEMENTS

Further enhancements to the proposed system can involve the detection of fake news from images. The GUI of the system can be improved for presentable appearance and as per the liking of the user. The system can be changed according to the needs of the industry. We can also develop a website in order to detect fake news from an image or video. Hence, the uses of the proposed system are many and can involve a series of changes according to the industry used. This model can also be implemented in social media applications in order to control the dissemination of fake news.

BIBLIOGRAPHY

- nishitpatel01/Fake_News_Detection
- FakeNewsDetection/FakeBuster
- FavioVazquez/fake-news
- ajay jindal/Fake-News-Detection
- Kushal Agarwalla, Shubham Nandan, Varun Anil Nair, D. Deva Hema –“Fake News Detection on Machine Learning and Natural Language Process”.
- Kai Shu , Amy Sliva , Suhang Wang , Jiliang Tang and Huan Liu- “Fake News Detection using Data Mining Perspective”.