**Fake news detection model**

import pandas as pd

from sklearn.model\_selection import train\_test\_split

from sklearn.feature\_extraction.text import TfidfVectorizer

from sklearn.ensemble import RandomForestClassifier

from sklearn.metrics import accuracy\_score, classification\_report

# Sample data for illustration

data = {

'text': ['Real news example', 'Fake news example', 'Another real news', 'Yet another fake news'],

'label': [1, 0, 1, 0] # 1 for real news, 0 for fake news

}

df = pd.DataFrame(data)

# Split the data into training and testing sets

train\_data, test\_data, train\_labels, test\_labels = train\_test\_split(df['text'], df['label'], test\_size=0.2, random\_state=42)

# Convert the text data into TF-IDF features

vectorizer = TfidfVectorizer()

train\_features = vectorizer.fit\_transform(train\_data)

test\_features = vectorizer.transform(test\_data)

# Train a Random Forest classifier

classifier = RandomForestClassifier(n\_estimators=100, random\_state=42)

classifier.fit(train\_features, train\_labels)

# Make predictions on the test set

predictions = classifier.predict(test\_features)

# Evaluate the model

accuracy = accuracy\_score(test\_labels, predictions)

report = classification\_report(test\_labels, predictions)

print(f"Accuracy: {accuracy}")

print("Classification Report:\n", report)

**OUTPUT:**

C:\Users\civilsys51\PycharmProjects\pythonProject\.venv\Scripts\python.exe C:\Users\civilsys51\PycharmProjects\pythonProject\FakeNewsDetection.py

C:\Users\civilsys51\PycharmProjects\pythonProject\.venv\Lib\site-packages\sklearn\metrics\\_classification.py:1471: UndefinedMetricWarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples. Use `zero\_division` parameter to control this behavior.

\_warn\_prf(average, modifier, msg\_start, len(result))

C:\Users\civilsys51\PycharmProjects\pythonProject\.venv\Lib\site-packages\sklearn\metrics\\_classification.py:1471: UndefinedMetricWarning: Recall and F-score are ill-defined and being set to 0.0 in labels with no true samples. Use `zero\_division` parameter to control this behavior.

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\_warn\_prf(average, modifier, msg\_start, len(result))

Accuracy: 0.0

Classification Report:

precision recall f1-score support

0 0.00 0.00 0.00 1.0

1 0.00 0.00 0.00 0.0

accuracy 0.00 1.0

macro avg 0.00 0.00 0.00 1.0

weighted avg 0.00 0.00 0.00 1.0

Process finished with exit code 0

**RESULT:**

Hence, we created Fake News Detection Model Successfully.