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In [11]: pip install pandas matplotlib seaborn textblob nltk
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Requirement already satisfied: pandas in c:\users\91988\anaconda3\lib\site-packages (1.4.2)
Requirement already satisfied: matplotlib in c:\users\91988\anaconda3\lib\site-packages (3.5.1)
Requirement already satisfied: seaborn in c:\users\91988\anaconda3\lib\site-packages (0.11.2)
Requirement already satisfied: textblob in c:\users\91988\anaconda3\lib\site-packages (0.18.0.post0)
Requirement already satisfied: nltk in c:\users\91988\anaconda3\lib\site-packages (3.9.1)
Requirement already satisfied: python-dateutil>=2.8.1 in c:\users\91988\anaconda3\lib\site-packages (from pandas) (2.8.2)
Requirement already satisfied: numpy>=1.18.5 in c:\users\91988\anaconda3\lib\site-packages (from pandas) (1.21.5)
Requirement already satisfied: pytz>=2020.1 in c:\users\91988\anaconda3\lib\site-packages (from pandas) (2021.3)
Requirement already satisfied: pyparsing>=2.2.1 in c:\users\91988\anaconda3\lib\site-packages (from matplotlib) (3.0.4)
Requirement already satisfied: packaging>=20.0 in c:\users\91988\anaconda3\lib\site-packages (from matplotlib) (21.3)
Requirement already satisfied: cyclor>=0.10 in c:\users\91988\anaconda3\lib\site-packages (from matplotlib) (0.11.0)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\91988\anaconda3\lib\site-packages (from matplotlib) (4.25.0)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\91988\anaconda3\lib\site-packages (from matplotlib) (1.3.2)
Requirement already satisfied: pillow>=6.2.0 in c:\users\91988\anaconda3\lib\site-packages (from matplotlib) (9.0.1)
Requirement already satisfied: scipy>=1.0 in c:\users\91988\anaconda3\lib\site-packages (from seaborn) (1.7.3)
Requirement already satisfied: regex>=2021.8.3 in c:\users\91988\anaconda3\lib\site-packages (from nltk) (2022.3.15)
Requirement already satisfied: tqdm in c:\users\91988\anaconda3\lib\site-packages (from nltk) (4.64.0)
Requirement already satisfied: joblib in c:\users\91988\anaconda3\lib\site-packages (from nltk) (1.1.0)
Requirement already satisfied: click in c:\users\91988\anaconda3\lib\site-packages (from nltk) (8.0.4)
Requirement already satisfied: six>=1.5 in c:\users\91988\anaconda3\lib\site-packages (from python-dateutil>=2.8.1->pandas) (1.16.0)
Requirement already satisfied: colorama in c:\users\91988\anaconda3\lib\site-packages (from click->nltk) (0.4.4)
Note: you may need to restart the kernel to use updated packages.
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In [13]: pip install textblob
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Requirement already satisfied: textblob in c:\users\91988\anaconda3\lib\site-packages (0.18.0.post0)  
Requirement already satisfied: nltk>=3.8 in c:\users\91988\anaconda3\lib\site-packages (from textblob) (3.9.1)  
Requirement already satisfied: tqdm in c:\users\91988\anaconda3\lib\site-packages (from nltk>=3.8->textblob) (4.64.0)  
Requirement already satisfied: regex>=2021.8.3 in c:\users\91988\anaconda3\lib\site-packages (from nltk>=3.8->textblob) (2022.3.15)  
Requirement already satisfied: joblib in c:\users\91988\anaconda3\lib\site-packages (from nltk>=3.8->textblob) (1.1.0)  
Requirement already satisfied: click in c:\users\91988\anaconda3\lib\site-packages (from nltk>=3.8->textblob) (8.0.4)  
Requirement already satisfied: colorama in c:\users\91988\anaconda3\lib\site-packages (from click->nltk>=3.8->textblob) (0.4.4)  
Note: you may need to restart the kernel to use updated packages.
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In [9]: pip install pandas scikit-learn matplotlib seaborn wordcloud
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Requirement already satisfied: pandas in c:\users\91988\anaconda3\lib\site-packages (1.4.2)
Requirement already satisfied: scikit-learn in c:\users\91988\anaconda3\lib\site-packages (1.0.2)
Requirement already satisfied: matplotlib in c:\users\91988\anaconda3\lib\site-packages (3.5.1)
Requirement already satisfied: seaborn in c:\users\91988\anaconda3\lib\site-packages (0.11.2)
Requirement already satisfied: wordcloud in c:\users\91988\anaconda3\lib\site-packages (1.9.3)
Requirement already satisfied: python-dateutil>=2.8.1 in c:\users\91988\anaconda3\lib\site-packages (from pandas) (2.8.2)
Requirement already satisfied: numpy>=1.18.5 in c:\users\91988\anaconda3\lib\site-packages (from pandas) (1.21.5)
Requirement already satisfied: pytz>=2020.1 in c:\users\91988\anaconda3\lib\site-packages (from pandas) (2021.3)
Requirement already satisfied: threadpoolctl>=2.0.0 in c:\users\91988\anaconda3\lib\site-packages (from scikit-learn) (2.2.0)
Requirement already satisfied: joblib>=0.11 in c:\users\91988\anaconda3\lib\site-packages (from scikit-learn) (1.1.0)
Requirement already satisfied: scipy>=1.1.0 in c:\users\91988\anaconda3\lib\site-packages (from scikit-learn) (1.7.3)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\91988\anaconda3\lib\site-packages (from matplotlib) (1.3.2)
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Requirement already satisfied: cycler>=0.10 in c:\users\91988\anaconda3\lib\site-packages (from matplotlib) (0.11.0)
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Note: you may need to restart the kernel to use updated packages.
```



```
In [18]: # Import necessary libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
from textblob import TextBlob
import nltk

data_path = "C:/Users/91988/Downloads/tweets_data.csv"
tweets_data = pd.read_csv(data_path, encoding='utf-8')

# Display the first few rows of the dataset
print(tweets_data.head())

# Check the columns in the dataset
print(tweets_data.columns)

if 'text' in tweets_data.columns:
    # Function to calculate sentiment
    def analyze_sentiment(text):
        analysis = TextBlob(text)
        # Return sentiment polarity
        return analysis.sentiment.polarity

    tweets_data['sentiment'] = tweets_data['text'].apply(analyze_sentiment)

    # Classify sentiment as Positive, Negative, or Neutral
    def classify_sentiment(polarity):
        if polarity > 0:
            return 'Positive'
        elif polarity < 0:
            return 'Negative'
        else:
            return 'Neutral'

    tweets_data['sentiment_label'] = tweets_data['sentiment'].apply(classify_s

    # Display the sentiment distribution
    sentiment_counts = tweets_data['sentiment_label'].value_counts()
    print(sentiment_counts)

    # Plot the sentiment distribution
    plt.figure(figsize=(10, 5))
    sns.barplot(x=sentiment_counts.index, y=sentiment_counts.values, palette='
    plt.title('Sentiment Distribution of Tweets')
    plt.xlabel('Sentiment')
    plt.ylabel('Number of Tweets')
    plt.xticks(rotation=45)
    plt.show()

else:
    print("Column 'text' not found in the dataset.")
```

	tweet_id	airline_sentiment	airline_sentiment_confidence	\
0	5.703060e+17	neutral	1.0000	
1	5.703010e+17	positive	0.3486	
2	5.703010e+17	neutral	0.6837	
3	5.703010e+17	negative	1.0000	
4	5.703010e+17	negative	1.0000	

	negativereason	negativereason_confidence	airline	\
0	NaN	NaN	Virgin America	
1	NaN	0.0000	Virgin America	
2	NaN	NaN	Virgin America	
3	Bad Flight	0.7033	Virgin America	
4	Can't Tell	1.0000	Virgin America	

	airline_sentiment_gold	name	negativereason_gold	retweet_count	\
0	NaN	cairdin	NaN	0	
1	NaN	jnardino	NaN	0	
2	NaN	yvonnalynn	NaN	0	
3	NaN	jnardino	NaN	0	
4	NaN	jnardino	NaN	0	

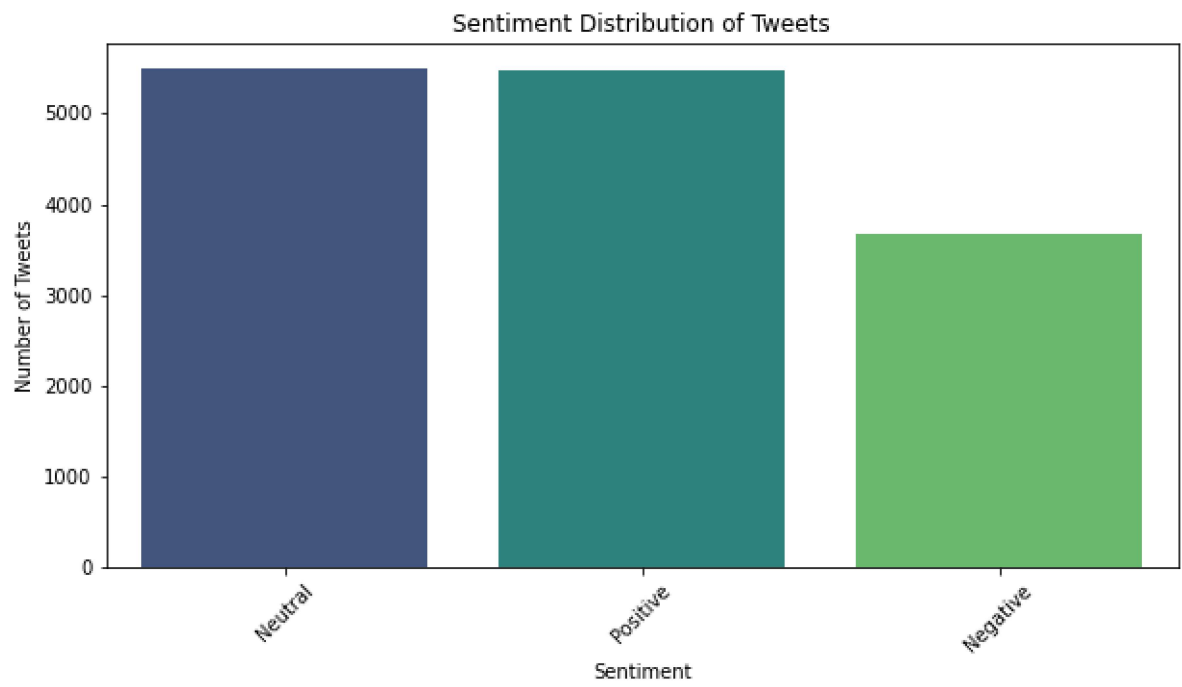
	text	tweet_coord	\
0	@VirginAmerica What @dhepburn said.	NaN	
1	@VirginAmerica plus you've added commercials t...	NaN	
2	@VirginAmerica I didn't today... Must mean I n...	NaN	
3	@VirginAmerica it's really aggressive to blast...	NaN	
4	@VirginAmerica and it's a really big bad thing...	NaN	

	tweet_created	tweet_location	user_timezone
0	24 February 2015	NaN	Eastern Time (US & Canada)
1	2015-02-24	NaN	Pacific Time (US & Canada)
2	24-02-2015 11:15	Lets Play	Central Time (US & Canada)
3	24-02-2015 11:15	NaN	Pacific Time (US & Canada)
4	24-02-2015 11:14	NaN	Pacific Time (US & Canada)

```

Index(['tweet_id', 'airline_sentiment', 'airline_sentiment_confidence',
      'negativereason', 'negativereason_confidence', 'airline',
      'airline_sentiment_gold', 'name', 'negativereason_gold',
      'retweet_count', 'text', 'tweet_coord', 'tweet_created',
      'tweet_location', 'user_timezone'],
      dtype='object')
Neutral      5494
Positive     5477
Negative     3669
Name: sentiment_label, dtype: int64

```



In []: