

New folder/prodigy_infotech/ × prodigy_infotech_task4_DS - kai × +

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (pykerne) Logout

In [18]:

```
most_positive_tweet = dt[dt['Polarity'] == dt['Polarity'].max()]['tweet'].values[0]
most_negative_tweet = dt[dt['Polarity'] == dt['Polarity'].min()]['tweet'].values[0]

print('Most Positive Tweet:')
print(most_positive_tweet)

print('\nMost Negative Tweet:')
print(most_negative_tweet)
```

Most Positive Tweet:
Platinum is the best loot @Borderlands

Most Negative Tweet:
"What terrible bitch!"

Thank you!

New folder/prodigy_infotech/ × prodigy_infotech_task4_DS - kx × +

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

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Widgets

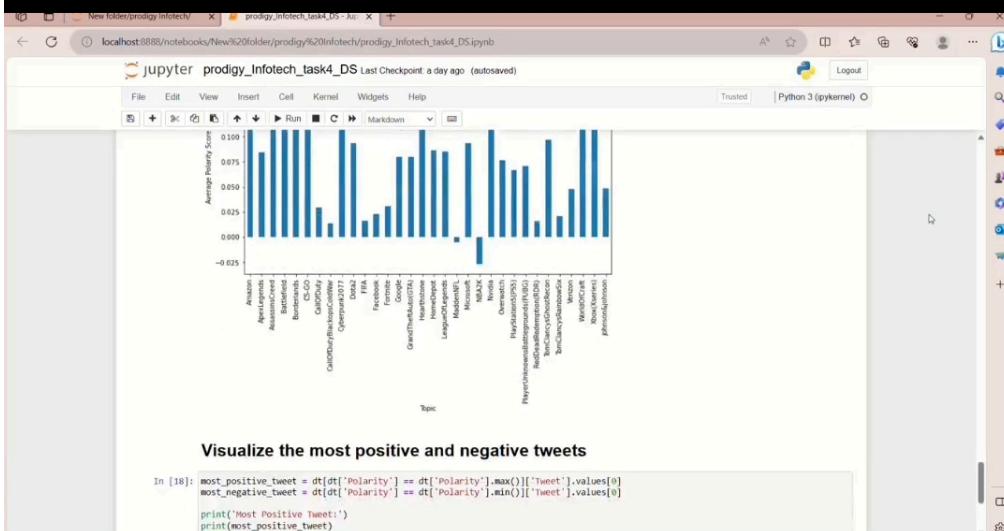
Topic

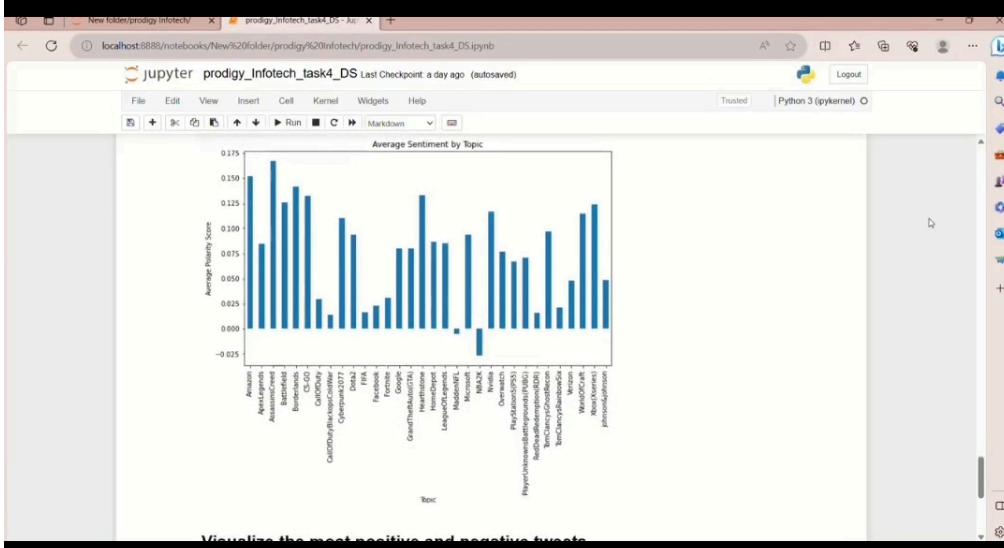
```
In [18]: most_positive_tweet = dt[dt['Polarity'] == dt['Polarity'].max()]['tweet'].values[0]
most_negative_tweet = dt[dt['Polarity'] == dt['Polarity'].min()]['tweet'].values[0]
print('Most Positive Tweet:')
print(most_positive_tweet)
print('\nMost Negative Tweet:')
print(most_negative_tweet)

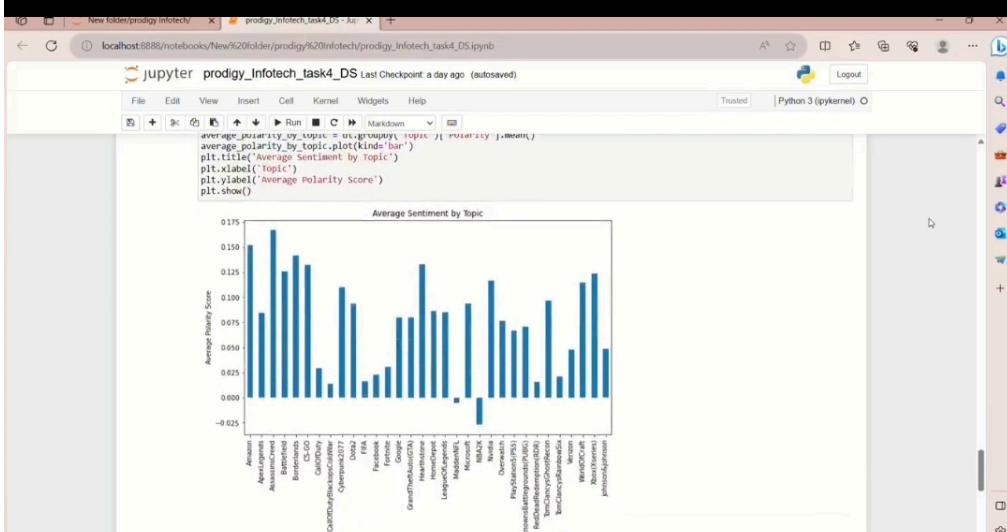
Most Positive Tweet:
Platinum is the best loot @Borderlands

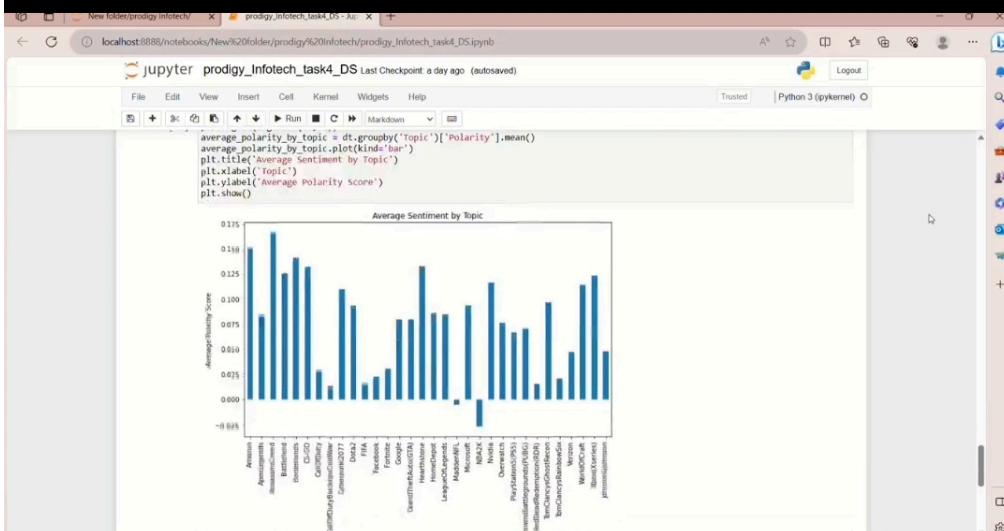
Most Negative Tweet:
"What terrible bitch!"
```

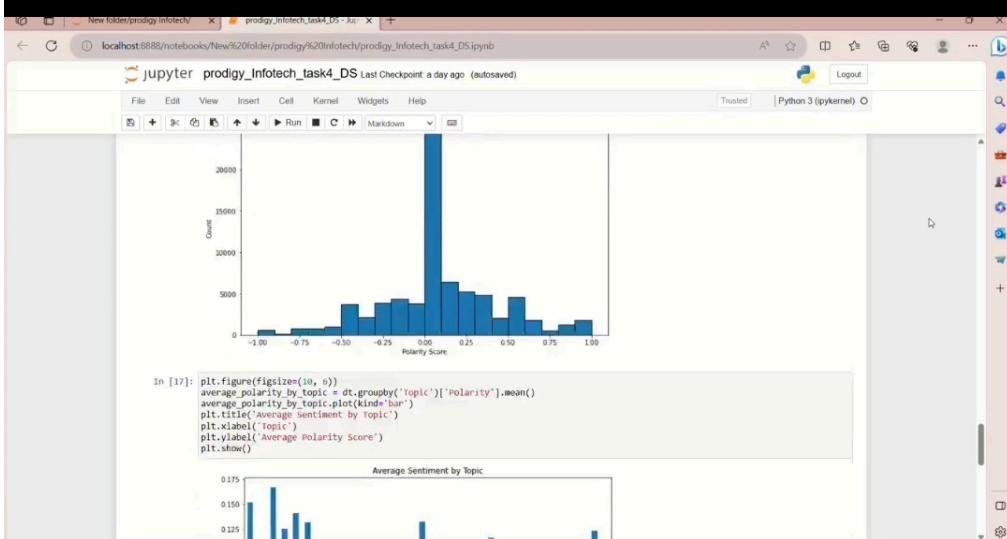
Thank you!

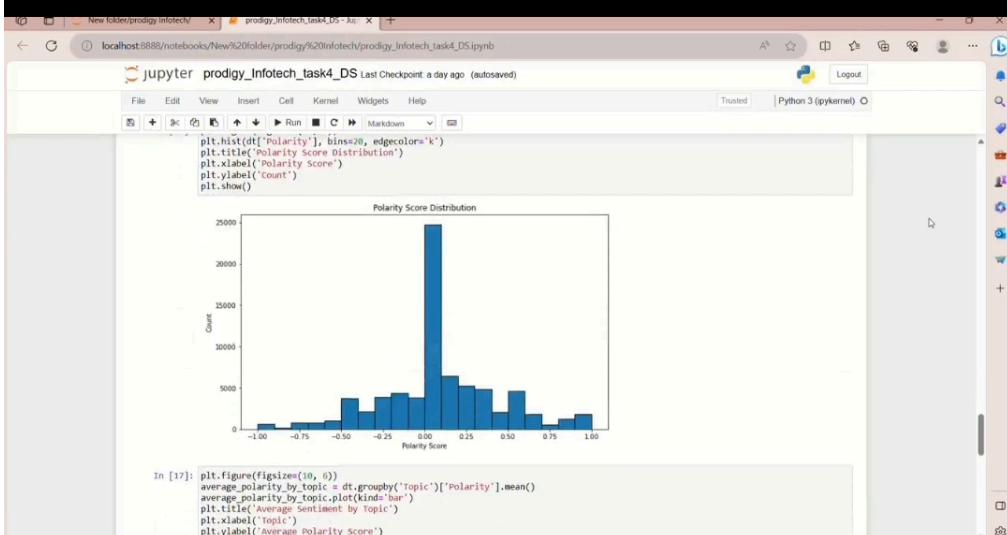


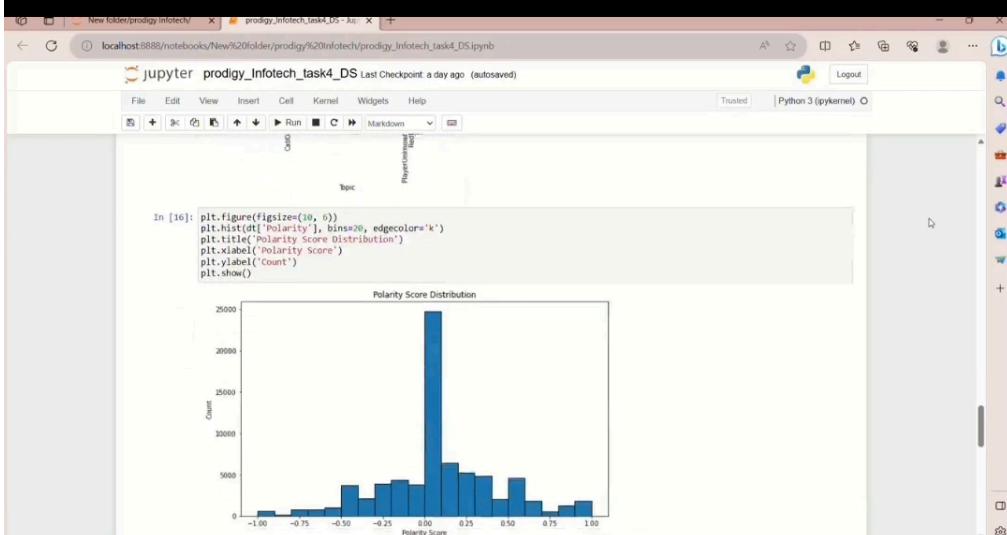


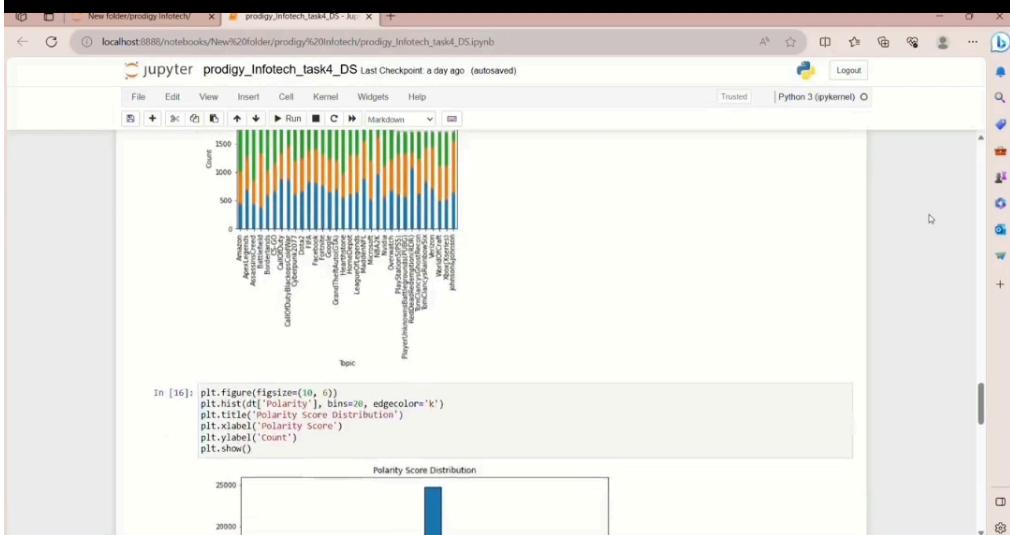


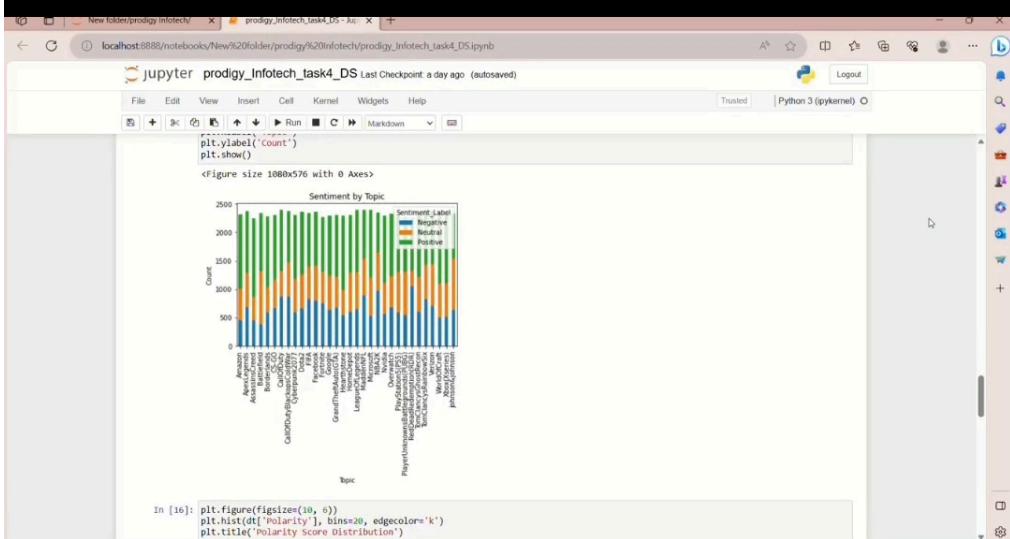


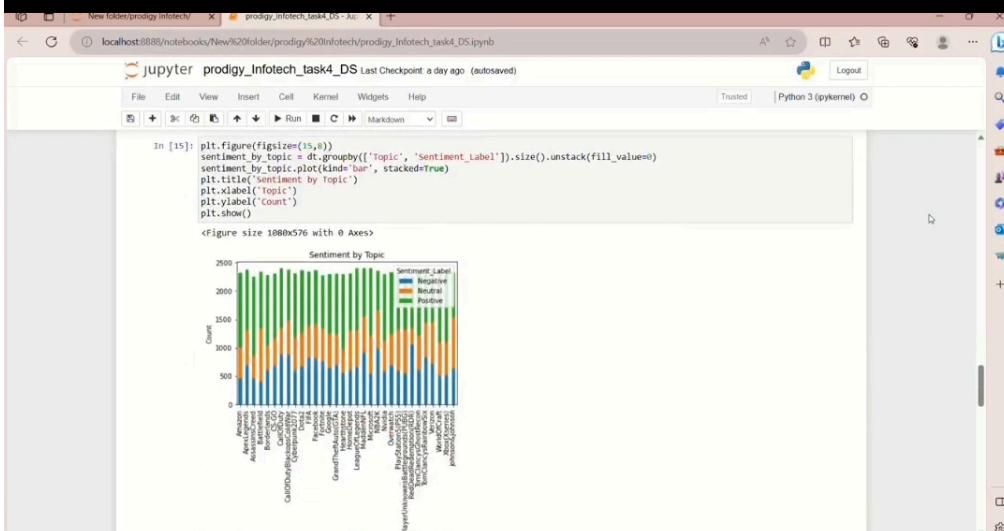


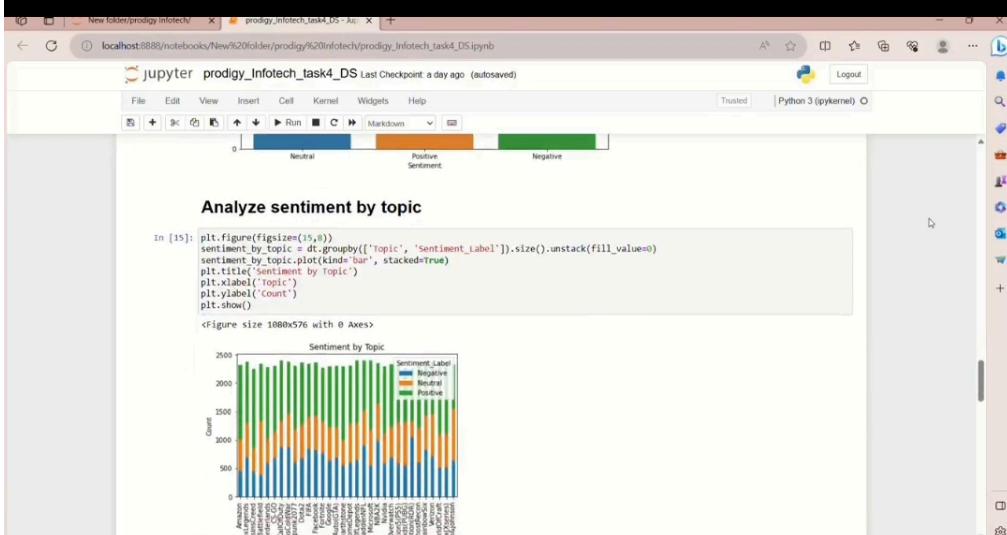


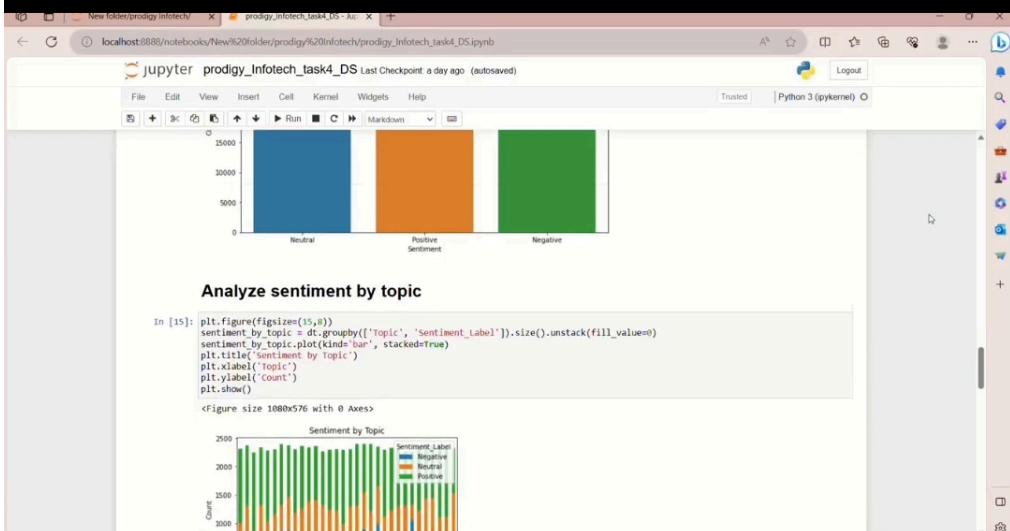


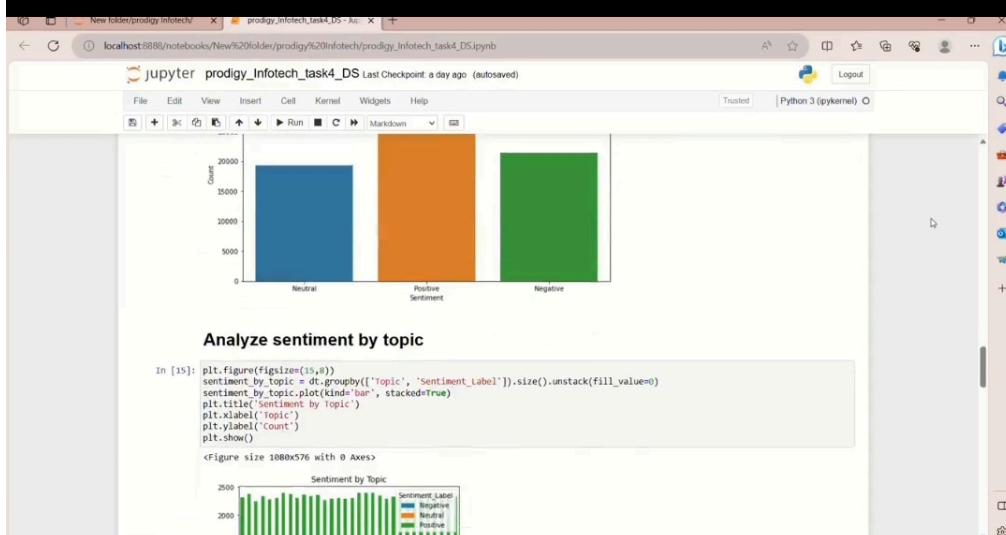


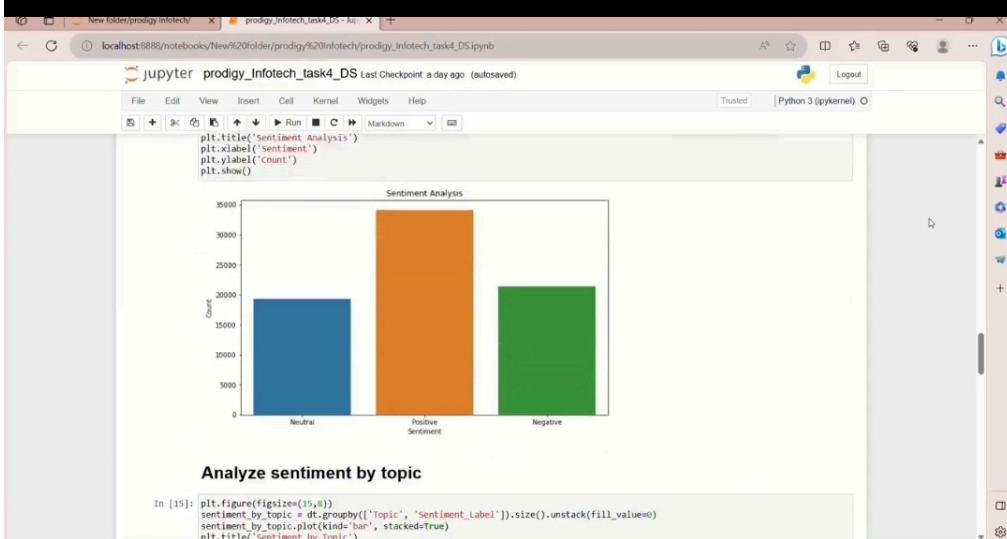


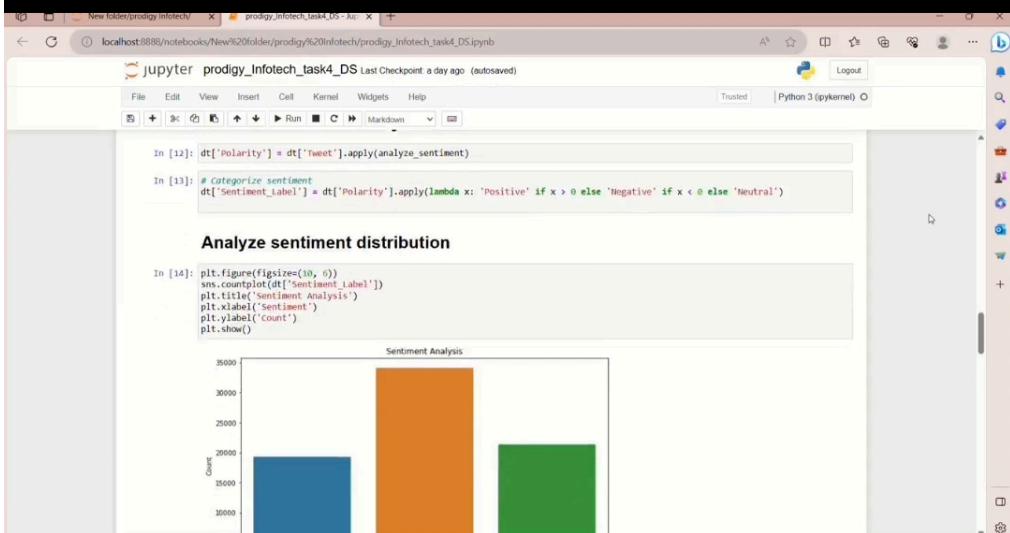


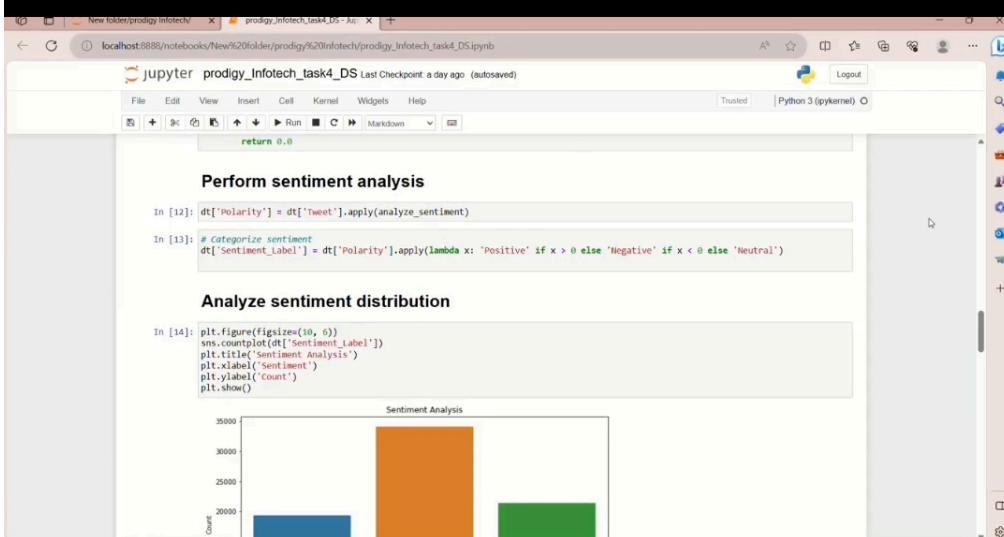


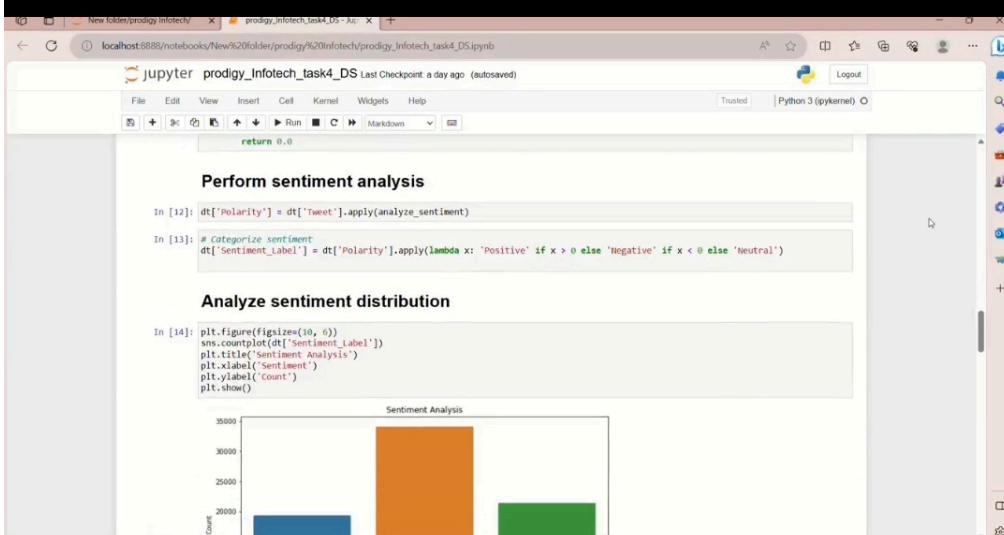












New folder/prodigy_infotech

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS

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```
c:\>class 'pandas.core.frame.DataFrame'>
RangeIndex: 74682 entries, 0 to 74681
Data columns (total 4 columns):
 #   Column      Non-Null Count  Dtype  
--- 
 0   ID          74682 non-null   int64  
 1   Topic       74682 non-null   object  
 2   Sentiment    74682 non-null   object  
 3   Tweet        73995 non-null   object  
dtypes: int64(1), object(3)
memory usage: 2.3+ MB
```

In [11]: *# Define a function to handle non-string values*

```
def analyze_sentiment(text):
    if isinstance(text, str):
        return TextBlob(text).sentiment.polarity
    else:
        return 0.0
```

Perform sentiment analysis

In [12]: `dt['Polarity'] = dt['Tweet'].apply(analyze_sentiment)`

In [13]: *# Categorize sentiment*

```
dt['Sentiment_Label'] = dt['Polarity'].apply(lambda x: 'Positive' if x > 0 else 'Negative' if x < 0 else 'Neutral')
```

Analyze sentiment distribution

In [14]: `plt.figure(figsize=(10, 6))
sns.countplot(dt['Sentiment_Label'])`

The screenshot shows a Jupyter Notebook interface running on a local host. The notebook has tabs for 'New folder/prodigy_infotech' and 'prodigy_infotech_task4_DS.ipynb'. The current tab displays the following code and its execution results:

```
In [9]: dt.isna().sum()
Out[9]:
ID          0
Topic       0
Sentiment    0
Tweet      606
dtype: int64
```

```
In [10]: dt.info()
Out[10]:
class: pandas.core.frame.DataFrame
RangeIndex: 74682 entries, 0 to 74681
Data columns (Total 4 columns):
 #   Column   Non-Null Count  Dtype  
 --- 
 0   ID        74682 non-null   int64  
 1   Topic     74682 non-null   object  
 2   Sentiment  74682 non-null   object  
 3   Tweet      73993 non-null   object  
dtypes: int64(1), object(3)
memory usage: 2.3+ MB
```

```
In [11]: # Define a function to handle non-string values
def analyze_sentiment(text):
    if isinstance(text, str):
        return TextBlob(text).sentiment.polarity
    else:
        return 0.0
```

Perform sentiment analysis

```
In [12]: dt['Polarity'] = dt['Tweet'].apply(analyze_sentiment)
```

The screenshot shows a Jupyter Notebook interface running on a Windows operating system. The title bar indicates the notebook is titled "prodigy_infotech_task4_DS.ipynb". The menu bar includes File, Edit, View, Insert, Cell, Kernel, Widgets, Help, and a Python 3 (pykernel) option. The toolbar contains icons for file operations like Open, Save, and Run, along with a Trusted status indicator.

The notebook displays the following code and its output:

```
In [7]: dt.size
Out[7]: 298728

In [8]: dt.describe()
Out[8]:
   ID
count    74882.000000
mean     6432.586195
std      3740.427870
min      1.000000
25%    3195.000000
50%    6422.000000
75%    9501.000000
max    13200.000000

In [9]: dt.isna().sum()
Out[9]:
ID          0
Topic       0
Sentiment    0
Tweet      686
dtype: int64

In [10]: dt.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 74882 entries, 0 to 74881
Data columns (total 4 columns):
```

localhost:8888/notebooks/New%20folder/prodigy_infotech%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

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In [4]: dt.columns
Out[4]: Index(['ID', 'Topic', 'Sentiment', 'Tweet'], dtype='object')

In [5]: dt.index
Out[5]: RangeIndex(start=0, stop=74682, step=1)

In [6]: dt.shape
Out[6]: (74682, 4)

In [7]: dt.size
Out[7]: 298728

In [8]: dt.describe()

Out[8]:

ID	
count	74682.000000
mean	6432.586165
std	3740.427870
min	1.000000
25%	3195.000000
50%	6422.000000
75%	9901.000000
max	13200.000000

New folder/prodigy_infotech/ prodigy_infotech_task4_DS - kaggle.ipynb

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (pykerne)

In [3]: dt.tail(10)

Out[3]:

ID	Topic	Sentiment	Tweet
74672	9199	Nvidia	Positive Let no elite go unnoticed... NVIDIA Highlights...
74673	9199	Nvidia	Positive Let no elin go unnoticed... NVIDIA Highlights...
74674	9199	Nvidia	Positive Let a no information elin that go unnoticed... --
74675	9199	Nvidia	Positive <unk> my elin be no... NVIDIA Highlights Pic...
74676	9200	Nvidia	Positive Just realized the windows partition of my Mac...
74677	9200	Nvidia	Positive Just realized that the Windows partition of my...
74678	9200	Nvidia	Positive Just realized that my Mac window partition is...
74679	9200	Nvidia	Positive Just realized the windows partition of my Mac...
74680	9200	Nvidia	Positive Just realized between the windows partition of...
74681	9200	Nvidia	Positive Just like the windows partition of my Mac is...

In [4]: dt.columns

Out[4]: Index(['ID', 'Topic', 'Sentiment', 'Tweet'], dtype='object')

In [5]: dt.index

Out[5]: RangeIndex(start=0, stop=74682, step=1)

In [6]: dt.shape

Out[6]: (74682, 4)

In [7]: dt.size

Out[7]: 298728

New folder/prodigy_infotech

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (pykernel) Logout

```
return lexicon(text).sentiment.polarity
else:
    return 0.0
```

Perform sentiment analysis

```
In [12]: dt['Polarity'] = dt['Tweet'].apply(analyze_sentiment)
In [13]: # Categorize sentiment
dt['Sentiment_Label'] = dt['Polarity'].apply(lambda x: 'Positive' if x > 0 else 'Negative' if x < 0 else 'Neutral')
```

Analyze sentiment distribution

```
In [14]: plt.figure(figsize=(10, 6))
sns.countplot(dt['Sentiment_Label'])
plt.title('Sentiment Analysis')
plt.xlabel('Sentiment')
plt.ylabel('Count')
plt.show()
```



Sentiment	Count
Positive	~20000
Negative	~35000
Neutral	~20000

New folder/prodigy_infotech

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS

Last Checkpoint: a day ago (autosaved)

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel) Logout

```
c:\>class 'pandas.core.frame.DataFrame'>
RangeIndex: 74682 entries, 0 to 74681
Data columns (total 4 columns):
 #   Column      Non-Null Count  Dtype  
--- 
 0   ID          74682 non-null   int64  
 1   Topic       74682 non-null   object  
 2   Sentiment    74682 non-null   object  
 3   Tweet        73995 non-null   object  
dtypes: int64(1), object(3)
memory usage: 2.3+ MB
```

In [11]: *# Define a function to handle non-string values*

```
def analyze_sentiment(text):
    if isinstance(text, str):
        return TextBlob(text).sentiment.polarity
    else:
        return 0.0
```

Perform sentiment analysis

In [12]: *dt[‘Polarity’] = dt[‘Tweet’].apply(analyze_sentiment)*

In [13]: *# Categorize sentiment*

```
dt[‘Sentiment_Label’] = dt[‘Polarity’].apply(lambda x: ‘Positive’ if x > 0 else ‘Negative’ if x < 0 else ‘Neutral’)
```

Analyze sentiment distribution

In [14]: *plt.figure(figsize=(10, 6))
sns.countplot(dt[‘Sentiment_Label’])*

New folder/prodigy_infotech

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

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In [9]: `dt.isna().sum()`

Out[9]:

	ID	Topic	Sentiment	Tweet
max	13200 000000	0	0	686

In [10]: `dt.info()`

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 74682 entries, 0 to 74681
Data columns (total 4 columns):
 #   Column   Non-Null Count  Dtype  
 --- 
 0   ID        74682 non-null  int64  
 1   Topic     74682 non-null  object  
 2   Sentiment  74682 non-null  object  
 3   Tweet     73998 non-null  object  
dtypes: int64(1), object(3)
memory usage: 2.3+ MB
```

In [11]: `# Define a function to handle non-string values`

```
def analyse_sentiment(text):
    if isinstance(text, str):
        return Textblob(text).sentiment.polarity
    else:
        return 0.0
```

Perform sentiment analysis

New folder/prodigy_infotech/ prodigy_infotech_task4_DS - kaggle.ipynb

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

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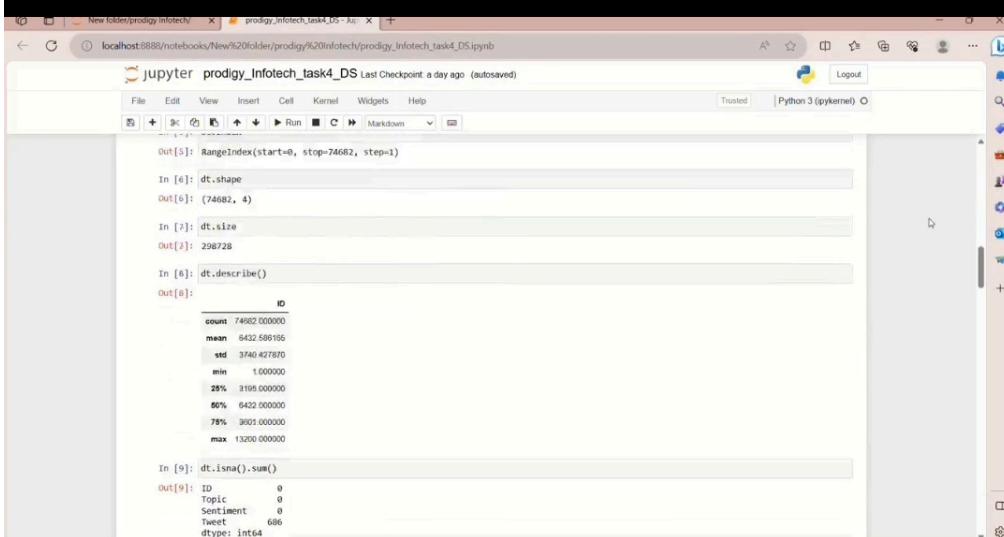
In [6]: dt.shape
Out[6]: (74682, 4)

In [7]: dt.size
Out[7]: 298728

In [6]: dt.describe()
Out[8]:

ID	
count	74982.000000
mean	6432.595195
std	3740.427870
min	1.000000
25%	3195.000000
50%	6432.000000
75%	9605.000000
max	13200.000000

In [9]: dt.isna().sum()
Out[9]: ID 0
Topic 0
Sentiment 0
Tweet 686
dtype: int64



Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

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In [4]: dt.columns

Out[4]: Index(['ID', 'Topic', 'Sentiment', 'Tweet'], dtype='object')

In [5]: dt.index

Out[5]: RangeIndex(start=0, stop=74682, step=1)

In [6]: dt.shape

Out[6]: (74682, 4)

In [7]: dt.size

Out[7]: 298728

In [8]: dt.describe()

Out[8]:

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

```
In [2]: # load the dataset
df = pd.read_csv('twitter_training.csv', names=['ID', 'Topic', 'Sentiment', 'Tweet'], header=None)
df.head(10)
```

ID	Topic	Sentiment	Tweet
0	Borderlands	Positive	im getting on borderlands and i will murder yo...
1	Borderlands	Positive	i am coming to the borders and i will kill you...
2	Borderlands	Positive	im getting on borderlands and i will kill you...
3	Borderlands	Positive	im coming on borderlands and i will murder you...
4	Borderlands	Positive	im getting on borderlands 2 and i will murder...
5	Borderlands	Positive	im getting into borderlands and i can murder y...
6	Borderlands	Positive	So I spent a few hours making something for fu...
7	Borderlands	Positive	So I spent a couple of hours doing something f...
8	Borderlands	Positive	So I spent a few hours doing something for fun...
9	Borderlands	Positive	So I spent a few hours making something for fu...

```
In [3]: df.tail(10)
```

ID	Topic	Sentiment	Tweet
74672	Nvidia	Positive	Let no elite go unnoticed. NVIDIA Highlights...
74673	9199	Positive	Let no elite go unnoticed. NVIDIA Highlights...
74674	9199	Positive	Let a no information elite that go unnoticed. ...
74675	9199	Positive	<Junk> my elite be no... NVIDIA Highlights Pt...
74676	9200	Positive	Just realized the windows partition of my Mac ...
74677	9200	Positive	Just realized that the Windows partition of my...

New folder/prodigy_infotech_xr

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

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In [1]:

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from textblob import TextBlob
import warnings
warnings.filterwarnings('ignore')
```

In [2]: # load the dataset

```
dt = pd.read_csv('twitter_training.csv', names=['ID', 'Topic', 'sentiment', 'Tweet'], header=None)
dt.head(10)
```

Out[2]:

ID	Topic	Sentiment	Tweet
0	Borderlands	Positive	im getting on borderlands and i will murder yo...
1	Borderlands	Positive	i am coming to the borders and i will kill you...
2	Borderlands	Positive	im getting on borderlands and i will kill you...
3	Borderlands	Positive	im coming on borderlands and i will murder you...
4	Borderlands	Positive	im getting on borderlands 2 and i will murder...
5	Borderlands	Positive	im getting into borderlands and i can murder y...
6	Borderlands	Positive	So I spent a few hours making something for fu...
7	Borderlands	Positive	So I spent a couple of hours doing something f...
8	Borderlands	Positive	So I spent a few hours doing something for fun...
9	Borderlands	Positive	So I spent a few hours making something for fu...

In [3]: dt.tail(10)

Out[3]:

ID	Topic	Sentiment	Tweet
0	Borderlands	Positive	im getting on borderlands and i will murder yo...
1	Borderlands	Positive	i am coming to the borders and i will kill you...
2	Borderlands	Positive	im getting on borderlands and i will kill you...
3	Borderlands	Positive	im coming on borderlands and i will murder you...
4	Borderlands	Positive	im getting on borderlands 2 and i will murder...
5	Borderlands	Positive	im getting into borderlands and i can murder y...
6	Borderlands	Positive	So I spent a few hours making something for fu...
7	Borderlands	Positive	So I spent a couple of hours doing something f...
8	Borderlands	Positive	So I spent a few hours doing something for fun...
9	Borderlands	Positive	So I spent a few hours making something for fu...

New folder/prodigy_infotech/ prodigy_infotech_task4_DS.ipynb

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

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Task 4: Analyzing and visualizing sentiment patterns in social media data.

Objective: To analyze and visualize sentiment patterns in social media data for comprehensive insights into public opinion and attitudes regarding specific topics or brands.

```
In [1]: import pandas as pd
import matplotlib as plt
import warnings as ws
from textblob import TextBlob
import warnings
warnings.filterwarnings('ignore')

In [2]: # load the dataset
dt = pd.read_csv('twitter_training.csv', names=['ID', 'Topic', 'Sentiment', 'Tweet'], header=None)
dt.head(10)

Out[2]:
```

ID	Topic	Sentiment	Tweet
0	Borderlands	Positive	im getting on borderlands and i will murder yo...
1	Borderlands	Positive	i am coming to the borders and i will kill you
2	Borderlands	Positive	im getting on borderlands and i will kill you
3	Borderlands	Positive	im coming on borderlands and i will murder you
4	Borderlands	Positive	im getting on borderlands 2 and i will murder
5	Borderlands	Positive	im getting into borderlands and i can murder y
6	Borderlands	Positive	So I spent a few hours cooking something for me
7	Borderlands	Positive	So I spent a couple of hours doing something f
8	Borderlands	Positive	So I spent a few hours doing something for fun

New folder/prodigy_infotech

localhost:8888/notebooks/New%20folder/prodigy%20infotech/prodigy_infotech_task4_DS.ipynb

Jupyter prodigy_Infotech_task4_DS Last Checkpoint: a day ago (autosaved)

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Task 4: Analyzing and visualizing sentiment patterns in social media data.

Objective: To analyze and visualize sentiment patterns in social media data for comprehensive insights into public opinion and attitudes regarding specific topics or brands.

```
In [1]: import pandas as pd
import matplotlib as plt
import warnings as ws
from textblob import TextBlob
import warnings
warnings.filterwarnings('ignore')

In [2]: # load the dataset
dt = pd.read_csv('twitter_training.csv', names=['ID', 'Topic', 'Sentiment', 'Tweet'], header=None)
dt.head(10)

Out[2]:
```

ID	Topic	Sentiment	Tweet
0	Borderlands	Positive	im getting on borderlands and i will murder yo...
1	Borderlands	Positive	I am coming to the borders and I will kill you
2	Borderlands	Positive	im getting on borderlands and i will kill you
3	Borderlands	Positive	im coming on borderlands and i will murder you
4	Borderlands	Positive	im getting on borderlands 7 and i will murder
5	Borderlands	Positive	im getting into borderlands and i can murder y
6	Borderlands	Positive	So I spent a few hours looking something fun,
7	Borderlands	Positive	So I spent a couple of hours doing something f
8	Borderlands	Positive	So I spent a few hours doing something for fun