




```
import pandas as pd
import matplotlib.pyplot as plt
```

```
data = pd.read_csv('twitter_training.csv')
```

```
data.head(10)
```





	2401	Borderlands	Positive	im getting on borderlands and i will murder you all ,	
0	2401	Borderlands	Positive	I am coming to the borders and I will kill you...	
1	2401	Borderlands	Positive	im getting on borderlands and i will kill you ...	
2	2401	Borderlands	Positive	im coming on borderlands and i will murder you...	
3	2401	Borderlands	Positive	im getting on borderlands 2 and i will murder ...	
4	2401	Borderlands	Positive	im getting into borderlands and i can murder y...	
5	2402	Borderlands	Positive	So I spent a few hours making something for fu...	
6	2402	Borderlands	Positive	So I spent a couple of hours doing something f...	
7	2402	Borderlands	Positive	So I spent a few hours doing something for fun...	
8	2402	Borderlands	Positive	So I spent a few hours making something for fu...	
9	2402	Borderlands	Positive	2010 So I spent a few hours making something f...	

Next steps:

[Generate code with data](#)

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```
data.describe()
```



	2401	
count	74681.000000	
mean	6432.640149	
std	3740.423819	
min	1.000000	
25%	3195.000000	
50%	6422.000000	
75%	9601.000000	
max	13200.000000	

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 74681 entries, 0 to 74680
Data columns (total 4 columns):
#   Column                                     Non-Null Count  Dtype
---  -
0   2401                                     74681 non-null  int64
1   Borderlands                             74681 non-null  object
2   Positive                                74681 non-null  object
3   im getting on borderlands and i will murder you all ,  73995 non-null  object
dtypes: int64(1), object(3)
memory usage: 2.3+ MB
```

```
col_names = ['ID', 'Entity', 'Sentiment', 'Content']
data = pd.read_csv('twitter_training.csv', names = col_names)
```

```
data.head()
```

	ID	Entity	Sentiment	Content	
0	2401	Borderlands	Positive	im getting on borderlands and i will murder yo...	
1	2401	Borderlands	Positive	I am coming to the borders and I will kill you...	
2	2401	Borderlands	Positive	im getting on borderlands and i will kill you ...	
3	2401	Borderlands	Positive	im coming on borderlands and i will murder you...	
4	2401	Borderlands	Positive	im getting on borderlands 2 and i will murder ...	

Next steps: [Generate code with data](#) [View recommended plots](#)

data.shape

(74682, 4)

data.isna().sum()

ID 0  
Entity 0  
Sentiment 0  
Content 686  
dtype: int64

data.dropna(axis=0 , inplace=True)  
data

	ID	Entity	Sentiment	Content
0	2401	Borderlands	Positive	im getting on borderlands and i will murder yo...
1	2401	Borderlands	Positive	I am coming to the borders and I will kill you...
2	2401	Borderlands	Positive	im getting on borderlands and i will kill you ...
3	2401	Borderlands	Positive	im coming on borderlands and i will murder you...
4	2401	Borderlands	Positive	im getting on borderlands 2 and i will murder ...
...	...	...	...	...
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 l...

73996 rows × 4 columns

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data.duplicated().sum()

2340

sentiment\_counts = data['Sentiment'].value\_counts()  
sentiment\_counts

Sentiment  
Negative 22358  
Positive 20655  
Neutral 18108  
Irrelevant 12875  
Name: count, dtype: int64

```
plt.figure(figsize=(6, 3))  
sentiment_counts.plot(kind='bar', color=['red', 'green', 'yellow', 'blue'])  
plt.title('Sentiment Distribution')  
plt.xlabel('Sentiment')  
plt.ylabel('Number of Tweets')  
plt.xticks(rotation=0)  
plt.show()
```

