

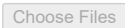
```
# Install the TextBlob package (needed for sentiment analysis)
!pip install textblob
```

```
# Import important Python libraries
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from textblob import TextBlob
```

```
Requirement already satisfied: textblob in /usr/local/lib/python3.11/dist-packages (0.19.0)
Requirement already satisfied: nltk>=3.9 in /usr/local/lib/python3.11/dist-packages (from textblob) (3.9.1)
Requirement already satisfied: click in /usr/local/lib/python3.11/dist-packages (from nltk>=3.9->textblob) (8.2.1)
Requirement already satisfied: joblib in /usr/local/lib/python3.11/dist-packages (from nltk>=3.9->textblob) (1.5.1)
Requirement already satisfied: regex>=2021.8.3 in /usr/local/lib/python3.11/dist-packages (from nltk>=3.9->textblob) (2024.11.6)
Requirement already satisfied: tqdm in /usr/local/lib/python3.11/dist-packages (from nltk>=3.9->textblob) (4.67.1)
```

```
from google.colab import files
```


```
uploaded = files.upload()
```

 No file chosen Upload widget is only available when the cell has been executed in the current browser session. Please rerun this cell to enable.

Saving college_event_feedback.csv to college_event_feedback.csv

```
# Load the uploaded CSV into a pandas DataFrame
df = pd.read_csv("college_event_feedback.csv")
```

```
# View the first few rows
df.head()
```

```


|   | Student_ID | Event_Name     | Rating | Feedback                                          |
|---|------------|----------------|--------|---------------------------------------------------|
| 0 | S1000      | Tech Fest      | 5      | Door stage just although development road forget. |
| 1 | S1001      | Startup Meetup | 1      | Never character west standard policy let decad... |
| 2 | S1002      | Startup Meetup | 5      | Quality increase face card shake right line ab... |
| 3 | S1003      | Workshop on AI | 4      | Support big window when leave attorney explain... |
| 4 | S1004      | Finance Summit | 4      | Anything ten nature cup capital strategy.         |


```

```
# Check for empty (null) values
df.isnull().sum()
```

```
# Remove empty rows if any
df.dropna(inplace=True)
```

```
# Remove extra spaces from feedback
df['Feedback'] = df['Feedback'].str.strip()
```

```
# Ensure ratings are numeric
df['Rating'] = pd.to_numeric(df['Rating'])
```

```
# Analyze sentiment polarity using TextBlob
def get_sentiment(text):
    return TextBlob(text).sentiment.polarity
```

```
# Apply sentiment scoring
df['Sentiment_Score'] = df['Feedback'].apply(get_sentiment)
```

```
# Label the sentiment as Positive, Negative, or Neutral
def label_sentiment(score):
    if score > 0.1:
        return 'Positive'
    elif score < -0.1:
        return 'Negative'
    else:
        return 'Neutral'
```

```
df['Sentiment_Label'] = df['Sentiment_Score'].apply(label_sentiment)
```

```
# Show results
df[['Feedback', 'Sentiment_Score', 'Sentiment_Label']].head()
```



	Feedback	Sentiment_Score	Sentiment_Label
0	Door stage just although development road forget.	0.000000	Neutral
1	Never character west standard policy let decad...	-0.233333	Negative
2	Quality increase face card shake right line ab...	-0.016071	Neutral
3	Support big window when leave attorney explain...	0.208333	Positive
4	Anything ten nature cup capital strategy.	0.000000	Neutral

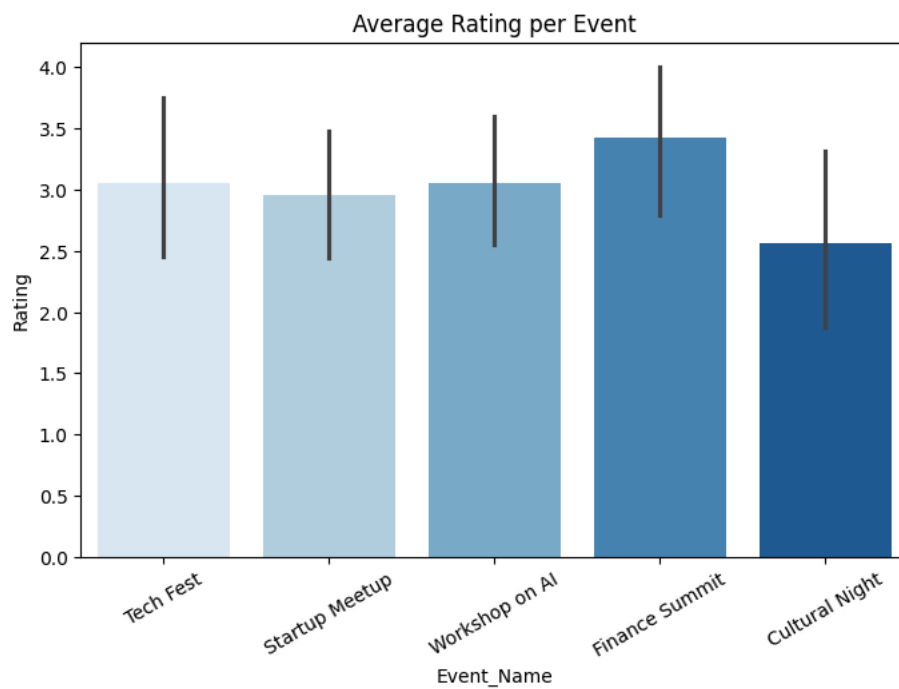
```
# Bar Chart: Average Rating per Event
plt.figure(figsize=(8,5))
sns.barplot(data=df, x='Event_Name', y='Rating', palette='Blues')
plt.title('Average Rating per Event')
plt.xticks(rotation=30)
plt.show()
```



/tmp/ipython-input-2129162375.py:3: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `x` variable to `hue` and set `l

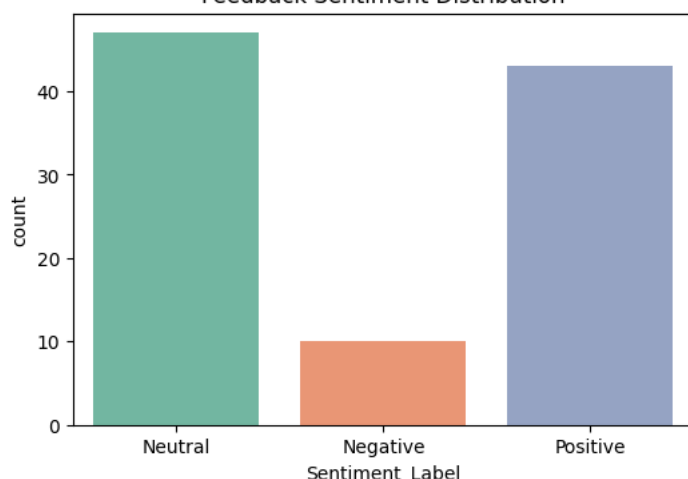
```
sns.barplot(data=df, x='Event_Name', y='Rating', palette='Blues')
```



```
# Countplot of Sentiment Labels
plt.figure(figsize=(6,4))
sns.countplot(data=df, x='Sentiment_Label', palette='Set2')
plt.title("Feedback Sentiment Distribution")
plt.show()
```

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `x` variable to `hue` and set `le`

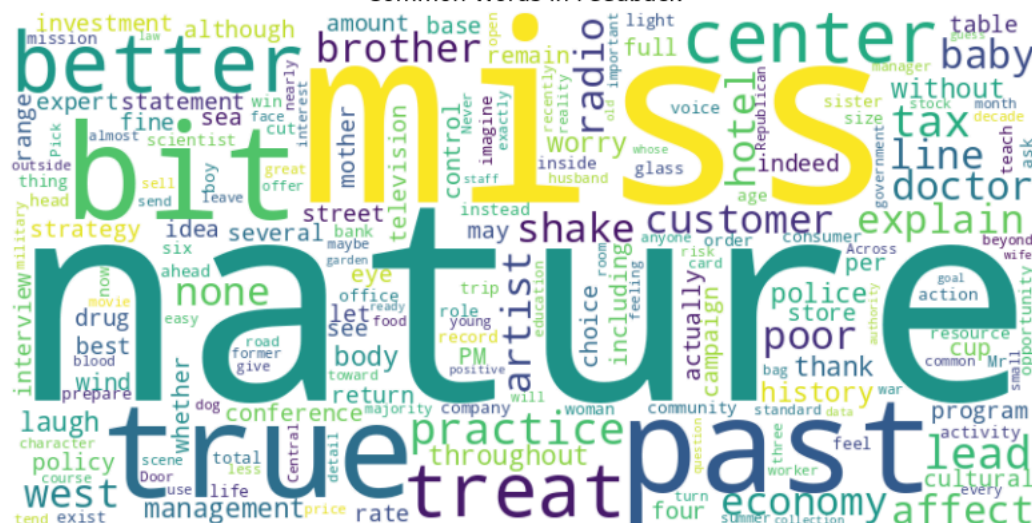
Feedback Sentiment Distribution



```
plt.figure(figsize=(10,5))
plt.imshow(wordcloud, interpolation='bilinear')
plt.axis("off")
plt.title("Common Words in Feedback")
plt.show()
```

```
Requirement already satisfied: wordcloud in /usr/local/lib/python3.11/dist-packages (1.9.4)
Requirement already satisfied: numpy>=1.6.1 in /usr/local/lib/python3.11/dist-packages (from wordcloud) (2.0.2)
Requirement already satisfied: pillow in /usr/local/lib/python3.11/dist-packages (from wordcloud) (11.3.0)
Requirement already satisfied: matplotlib in /usr/local/lib/python3.11/dist-packages (from wordcloud) (3.10.0)
Requirement already satisfied: contourpy>=1.0.1 in /usr/local/lib/python3.11/dist-packages (from matplotlib->wordcloud) (1.3.2)
Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.11/dist-packages (from matplotlib->wordcloud) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in /usr/local/lib/python3.11/dist-packages (from matplotlib->wordcloud) (4.59.0)
Requirement already satisfied: kiwisolver>=1.3.1 in /usr/local/lib/python3.11/dist-packages (from matplotlib->wordcloud) (1.4.8)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.11/dist-packages (from matplotlib->wordcloud) (25.0)
Requirement already satisfied: pyparsing>=2.3.1 in /usr/local/lib/python3.11/dist-packages (from matplotlib->wordcloud) (3.2.3)
Requirement already satisfied: python-dateutil>=2.7 in /usr/local/lib/python3.11/dist-packages (from matplotlib->wordcloud) (2.9.0)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.11/dist-packages (from python-dateutil>=2.7->matplotlib->wordcloud) (1.16.0)
```

Common Words in Feedback



```
# Save final result with sentiment labels
df.to_csv("event feedback with sentiment.csv", index=False)
```

```
# Download the file  
files.download("event_feedback_with_sentiment.csv")
```

—