App Reviews Sentiment Analysis using Python

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

Linkedin_data=pd.read_csv('linkedin-reviews.csv')

print(Linkedin_data.head())
```

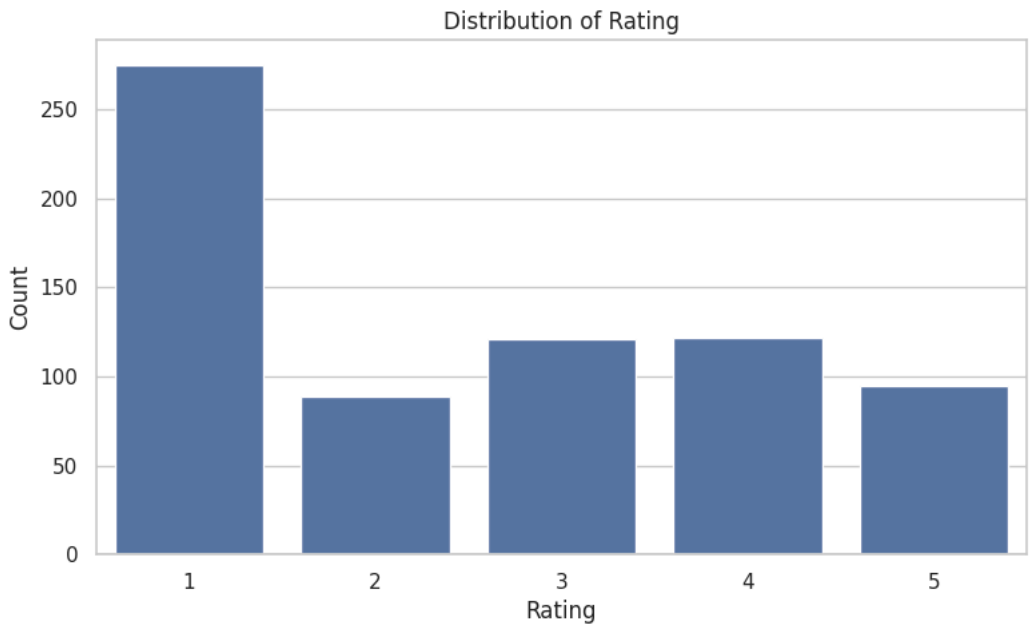
```
                                              Review  Rating
0  Does absolutely nothing for a LinkedIn beginne...       1
1                          Force close(galaxy tab)         1
2  Slow and it tries to upload your contacts with...       1
3  Add ability to customize the profile and move ...       4
4  Good app, but it's a pain that it's not possib...       4
```

```
print(Linkedin_data.info())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 702 entries, 0 to 701
Data columns (total 2 columns):
 #   Column  Non-Null Count  Dtype 
---  ------  --------------  ----- 
 0   Review  702 non-null    object
 1   Rating  702 non-null    int64 
dtypes: int64(1), object(1)
memory usage: 11.1+ KB
None
```

EDA Of Data

```
# Plotting the Distribution of Ratings
sns.set(style='whitegrid')
plt.figure(figsize=(9,5))
sns.countplot(data=Linkedin_data, x='Rating')
plt.title('Distribution of Rating')
plt.xlabel('Rating')
plt.ylabel('Count')
plt.show()
```

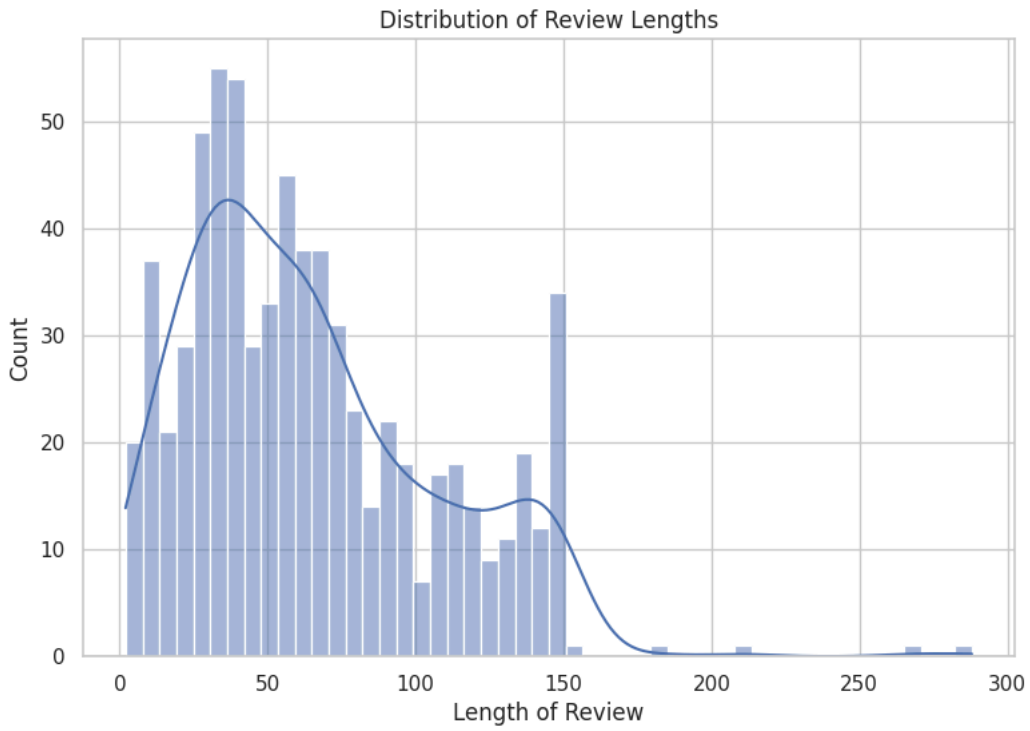



```
# Calculating The length of each review

Linkedin_data['Review Length']=Linkedin_data['Review'].apply(len)

# Plot Distribution of review lengths
plt.figure(figsize=(9,6))
sns.histplot(Linkedin_data['Review Length'],bins=50,kde=True)
plt.title('Distribution of Review Lengths')
plt.xlabel('Length of Review')
```

```
plt.ylabel('Count')
plt.show()
```



Adding Sentimental Labels To The Data

```
from textblob import TextBlob

def textblob_sentiment_analysis(review):
    sentiment=TextBlob(review).sentiment

    if sentiment.polarity > 0.1:
        return 'Positive'
    elif sentiment.polarity <-0.1:
        return 'Negative'
    else:
        return 'Neutral'

Linkedin_data['Sentiment']=Linkedin_data['Review'].apply(textblob_sentiment_analysis)
print(Linkedin_data.head())
```

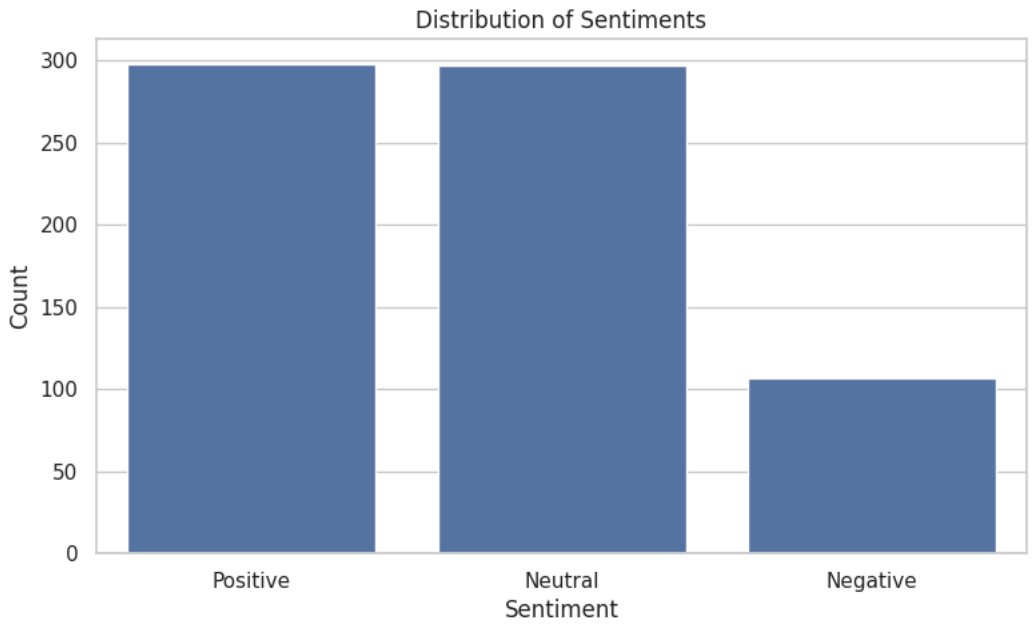
```
                                              Review  Rating  Review Length  \
0  Does absolutely nothing for a LinkedIn beginne...       1             80
1                           Force close(galaxy tab)       1             23
2  Slow and it tries to upload your contacts with...       1             61
3  Add ability to customize the profile and move ...       4             90
4  Good app, but it's a pain that it's not possib...       4            133

  Sentiment
0  Negative
1   Neutral
2  Negative
3   Neutral
4  Positive
```

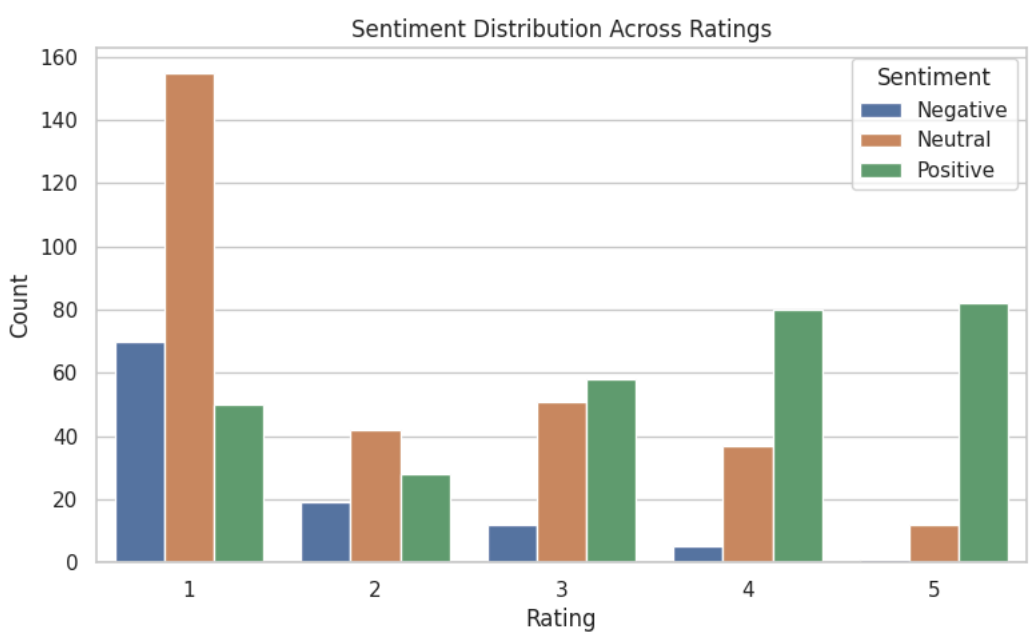
Analyzing App Reviews

```
sentiment_distribution = Linkedin_data['Sentiment'].value_counts()

plt.figure(figsize=(9,5))
sns.barplot(x=sentiment_distribution.index, y=sentiment_distribution.values)
plt.title('Distribution of Sentiments')
plt.xlabel('Sentiment')
plt.ylabel('Count')
plt.show()
```




```
plt.figure(figsize=(9,5))
sns.countplot(data=Linkedin_data, x='Rating', hue='Sentiment')
plt.title('Sentiment Distribution Across Ratings')
plt.xlabel('Rating')
plt.ylabel('Count')
plt.legend(title='Sentiment')
plt.show()
```



Text Analysis Using WordCloud

```
from wordcloud import WordCloud


def generate_word_cloud(sentiment):
    text = ' '.join(review for review in Linkedin_data[Linkedin_data['Sentiment'] == sentiment]['Review'])
    wordcloud = WordCloud(width=800, height=400, background_color ='white').generate(text)
    plt.figure(figsize=(10, 5))
    plt.imshow(wordcloud, interpolation='bilinear')
    plt.title(f'Word Cloud for {sentiment} Reviews')
    plt.axis('off')
    plt.show()

for sentiment in ['Positive', 'Negative', 'Neutral']:
    generate_word_cloud(sentiment)
```

Word Cloud for Positive Reviews

Word Cloud for Negative Reviews

Word Cloud for Neutral Reviews

Start coding or generate with AI.