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

```
df = pd.read_csv("2019.csv")
df.head()
```

	Overall rank	Country or region	Score	GDP per capita	Social support	Healthy life expectancy	Freedom to make life choices	Generosity	Perceptions of corruption
0	1	Finland	7.769	1.340	1.587	0.986	0.596	0.153	0.393
1	2	Denmark	7.600	1.383	1.573	0.996	0.592	0.252	0.410
2	3	Norway	7.554	1.488	1.582	1.028	0.603	0.271	0.341
3	4	Iceland	7.494	1.380	1.624	1.026	0.591	0.354	0.118

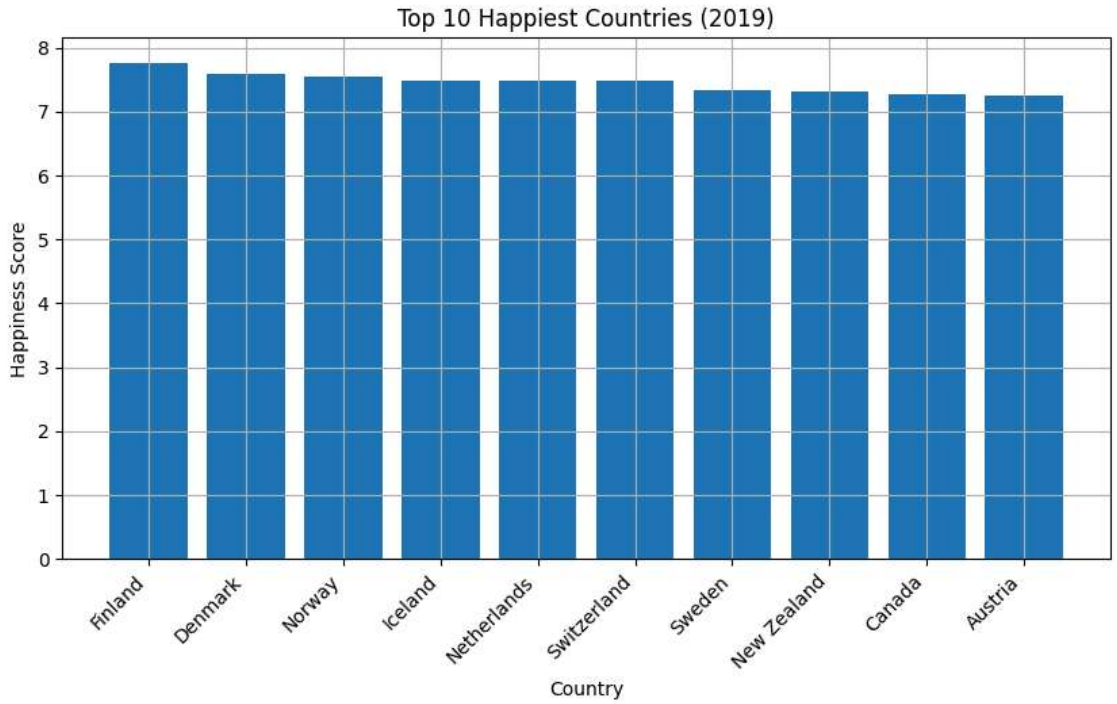
Next steps: Generate code with df | New interactive sheet

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 156 entries, 0 to 155
Data columns (total 9 columns):
 #   Column                        Non-Null Count  Dtype
---  ------                        --------------  -----
 0   Overall rank                  156 non-null    int64
 1   Country or region             156 non-null    object
 2   Score                         156 non-null    float64
 3   GDP per capita                156 non-null    float64
 4   Social support                156 non-null    float64
 5   Healthy life expectancy       156 non-null    float64
 6   Freedom to make life choices  156 non-null    float64
 7   Generosity                    156 non-null    float64
 8   Perceptions of corruption     156 non-null    float64
dtypes: float64(7), int64(1), object(1)
memory usage: 11.1+ KB
```

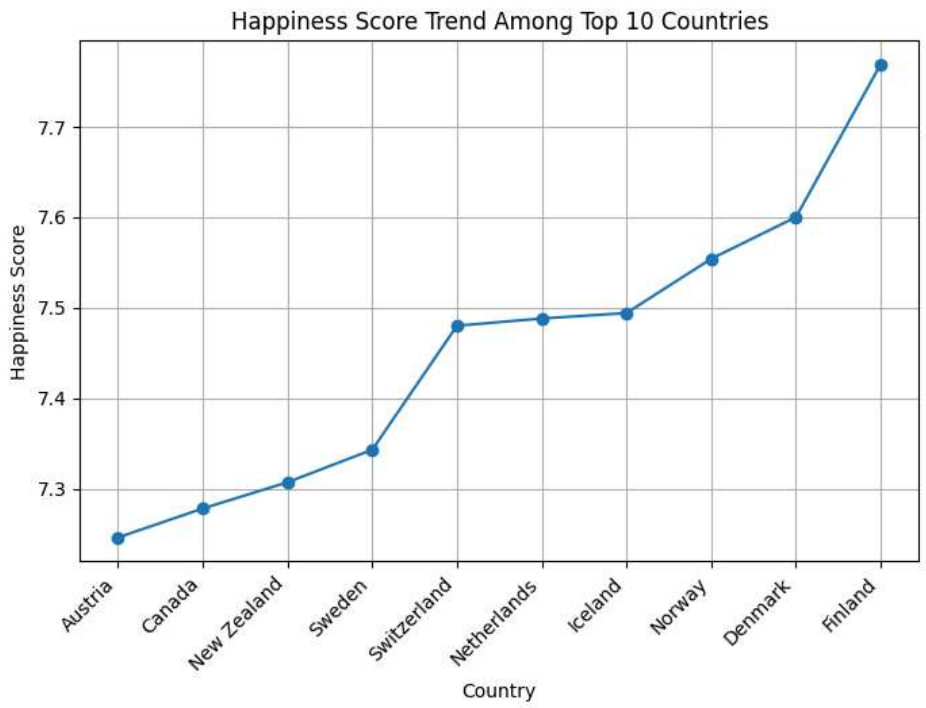
```
# Sort data by happiness score
top10 = df.sort_values(by="Score", ascending=False).head(10)

plt.figure(figsize=(10,5))
plt.bar(top10["Country or region"], top10["Score"])
plt.xticks(rotation=45, ha="right")
plt.xlabel("Country")
plt.ylabel("Happiness Score")
plt.title("Top 10 Happiest Countries (2019)")
plt.grid(True)
plt.show()
```



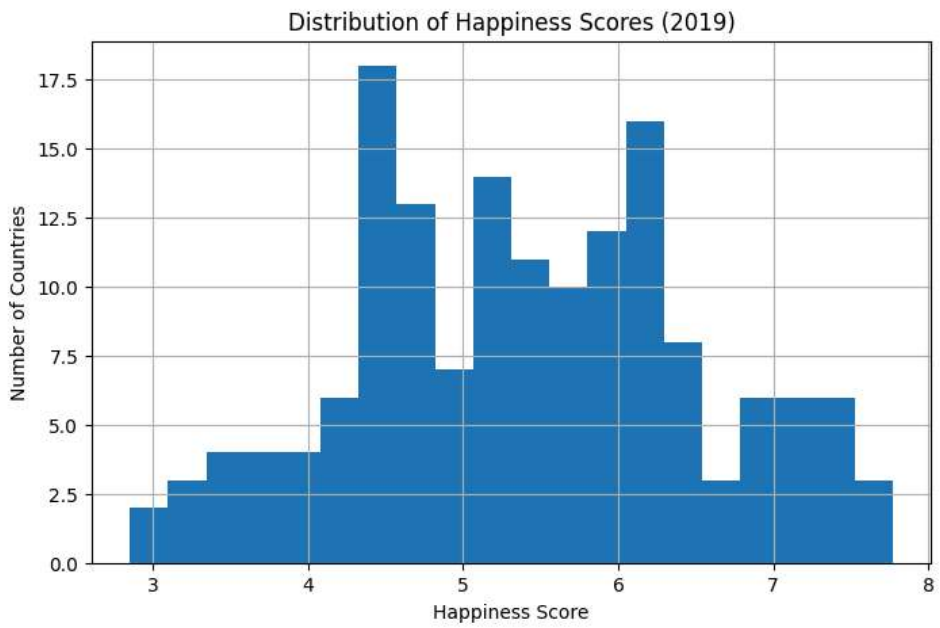

```
top10_sorted = top10.sort_values(by="Score")

plt.figure(figsize=(8,5))
plt.plot(top10_sorted["Country or region"], top10_sorted["Score"], marker='o')
plt.xticks(rotation=45, ha="right")
plt.xlabel("Country")
plt.ylabel("Happiness Score")
plt.title("Happiness Score Trend Among Top 10 Countries")
plt.grid(True)
plt.show()
```

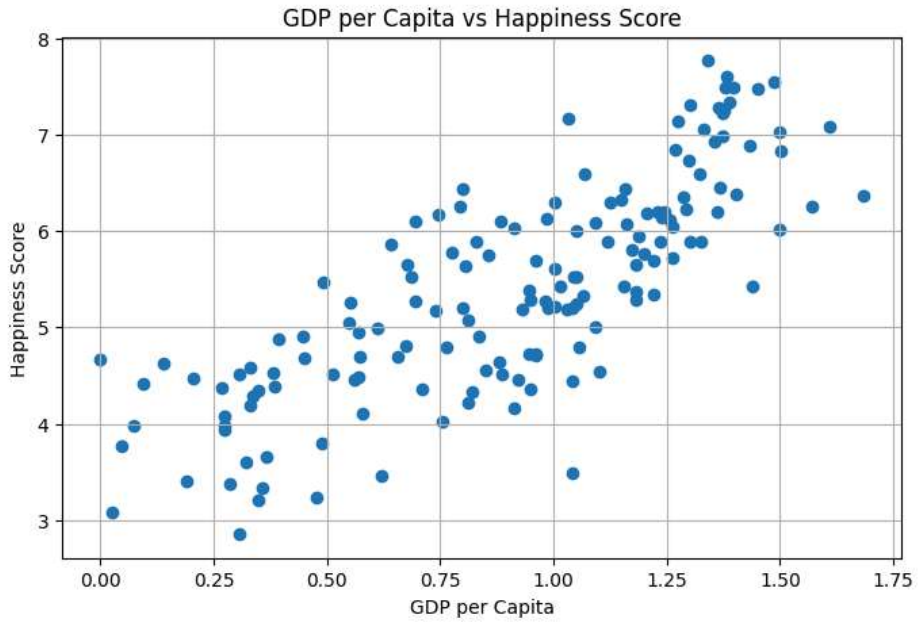



```
plt.figure(figsize=(8,5))
plt.hist(df["Score"], bins=20)
plt.xlabel("Happiness Score")
plt.ylabel("Number of Countries")
```

```
plt.title("Distribution of Happiness Scores (2019)")
plt.grid(True)
plt.show()
```




```
plt.figure(figsize=(8,5))
plt.scatter(df["GDP per capita"], df["Score"])
plt.xlabel("GDP per Capita")
plt.ylabel("Happiness Score")
plt.title("GDP per Capita vs Happiness Score")
plt.grid(True)
plt.show()
```



Insights:

1.Countries with higher GDP per capita generally have higher happiness scores, indicating economic stability plays a significant role in well-being.

2.The histogram shows most countries fall in a mid-range happiness score, with very few extremely happy or unhappy nations.

3.The bar chart highlights that top-ranked countries significantly outperform others, showing inequality in global happiness levels.