

```
In [2]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

In [53]: jk=pd.read_csv("C:\\Users\\USER\\Downloads\\Financial Analytics data.csv")
jk
```

Out[53]:

	S_No	Name	Mar_Cap-Crore	Sales_Qtr-Crore
0	1	Reliance Inds.	583436.72	9981.00
1	2	TCS	563709.84	394.00
2	3	HDFC Bank	482953.59	2581.27
3	4	ITC	320985.27	9772.20
4	5	H D F C	289497.37	1684.51
...
483	496	Lak. Vilas Bank	3029.57	79.17
484	497	NOCIL	3026.26	249.27
485	498	Orient Cement	3024.32	511.53
486	499	Natl.Fertilizer	3017.07	284.75
487	500	L T Foods	NaN	NaN

488 rows x 4 columns

```
In [54]: jk.dropna(inplace=True)
jk
```

Out[54]:

	S_No	Name	Mar_Cap-Crore	Sales_Qtr-Crore
0	1	Reliance Inds.	583436.72	9981.00
1	2	TCS	563709.84	394.00
2	3	HDFC Bank	482953.59	2581.27
3	4	ITC	320985.27	9772.20
4	5	H D F C	289497.37	1684.51
...
482	495	Prime Focus	3031.50	69.61
483	496	Lak. Vilas Bank	3029.57	79.17
484	497	NOCIL	3026.26	249.27
485	498	Orient Cement	3024.32	511.53
486	499	Natl.Fertilizer	3017.07	284.75

458 rows x 4 columns

```
In [55]: jk.columns

Out[55]: Index(['S_No', 'Name', 'Mar_Cap-Crore', 'Sales_Qtr-Crore'], dtype='object')
```

```
In [56]: jk['Mar_Cap-Crore'] = pd.to_numeric(jk['Mar_Cap-Crore'], errors='coerce')
jk['Sales_Qtr-Crore'] = pd.to_numeric(jk['Sales_Qtr-Crore'], errors='coerce')
```

```
In [57]: jk['Market Cap to Sales Ratio'] = jk['Mar_Cap-Crore'] / jk['Sales_Qtr-Crore']

In [58]: jk[['Mar_Cap-Crore', 'Sales_Qtr-Crore', 'Market Cap to Sales Ratio']].describe()
```

Out[58]:

	Mar_Cap-Crore	Sales_Qtr-Crore	Market Cap to Sales Ratio
count	458.000000	458.000000	458.000000
mean	28924.636921	2379.367336	58.637602
std	60612.374180	5779.588895	150.023460
min	3017.070000	5.800000	0.502757
25%	4964.322500	278.035000	6.780711
50%	10446.325000	722.100000	13.959611
75%	24747.930000	1894.512500	37.992749
max	583436.720000	74156.700000	1430.735635

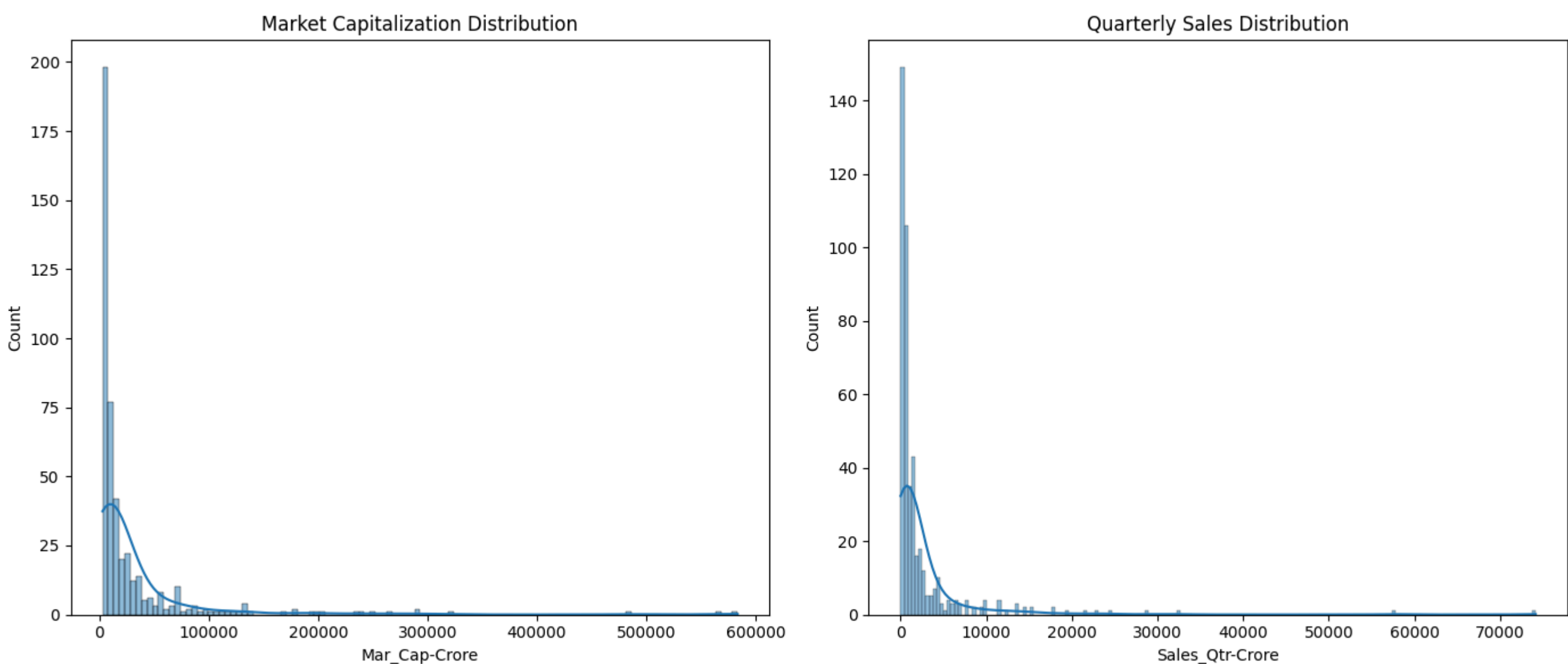
```
In [59]: crltn = jk[['Mar_Cap-Crore', 'Sales_Qtr-Crore', 'Market Cap to Sales Ratio']].corr()
crltn
```

Out[59]:

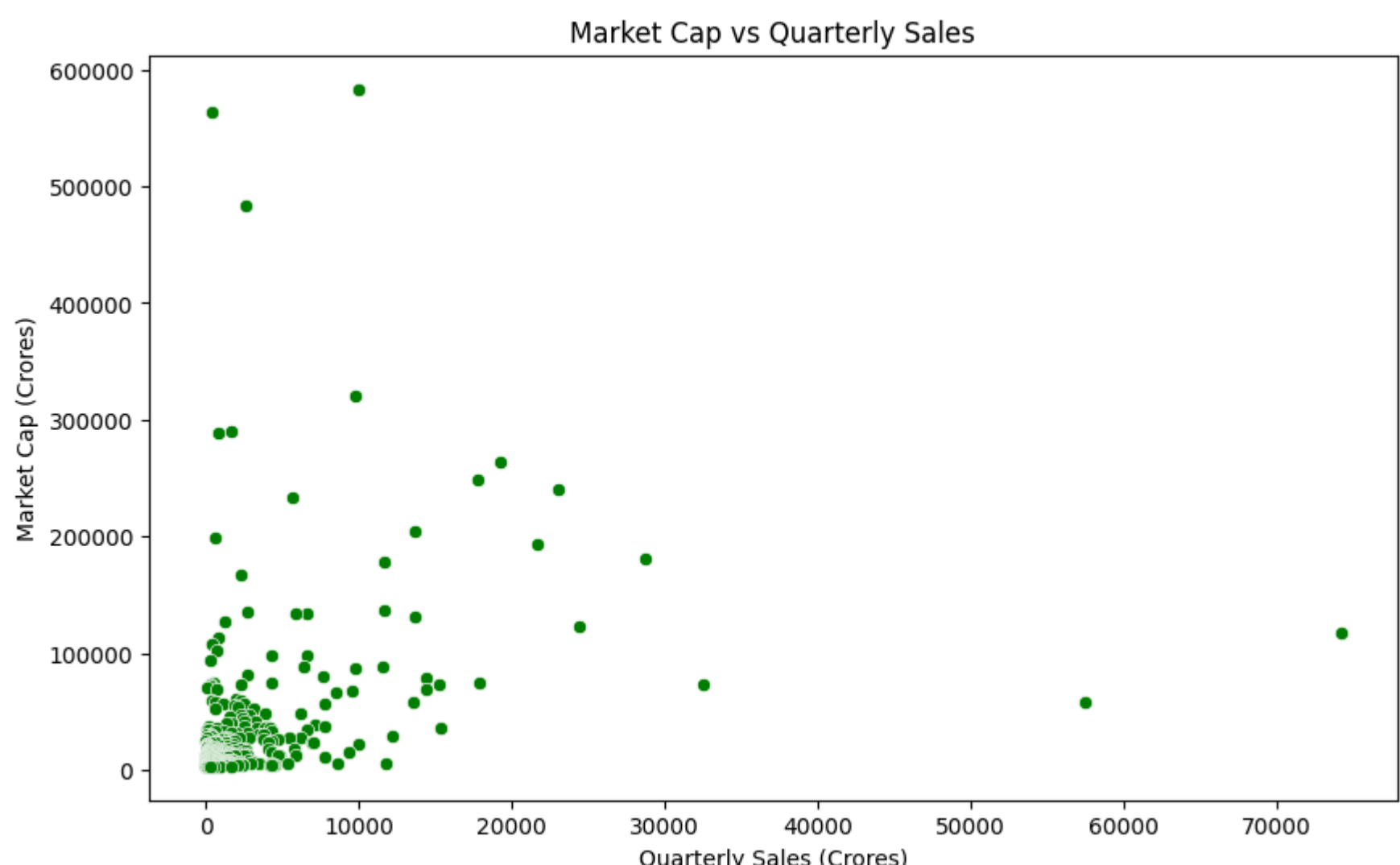
	Mar_Cap-Crore	Sales_Qtr-Crore	Market Cap to Sales Ratio
Mar_Cap-Crore	1.000000	0.349598	0.237265
Sales_Qtr-Crore	0.349598	1.000000	-0.127830
Market Cap to Sales Ratio	0.237265	-0.127830	1.000000

Visualization:

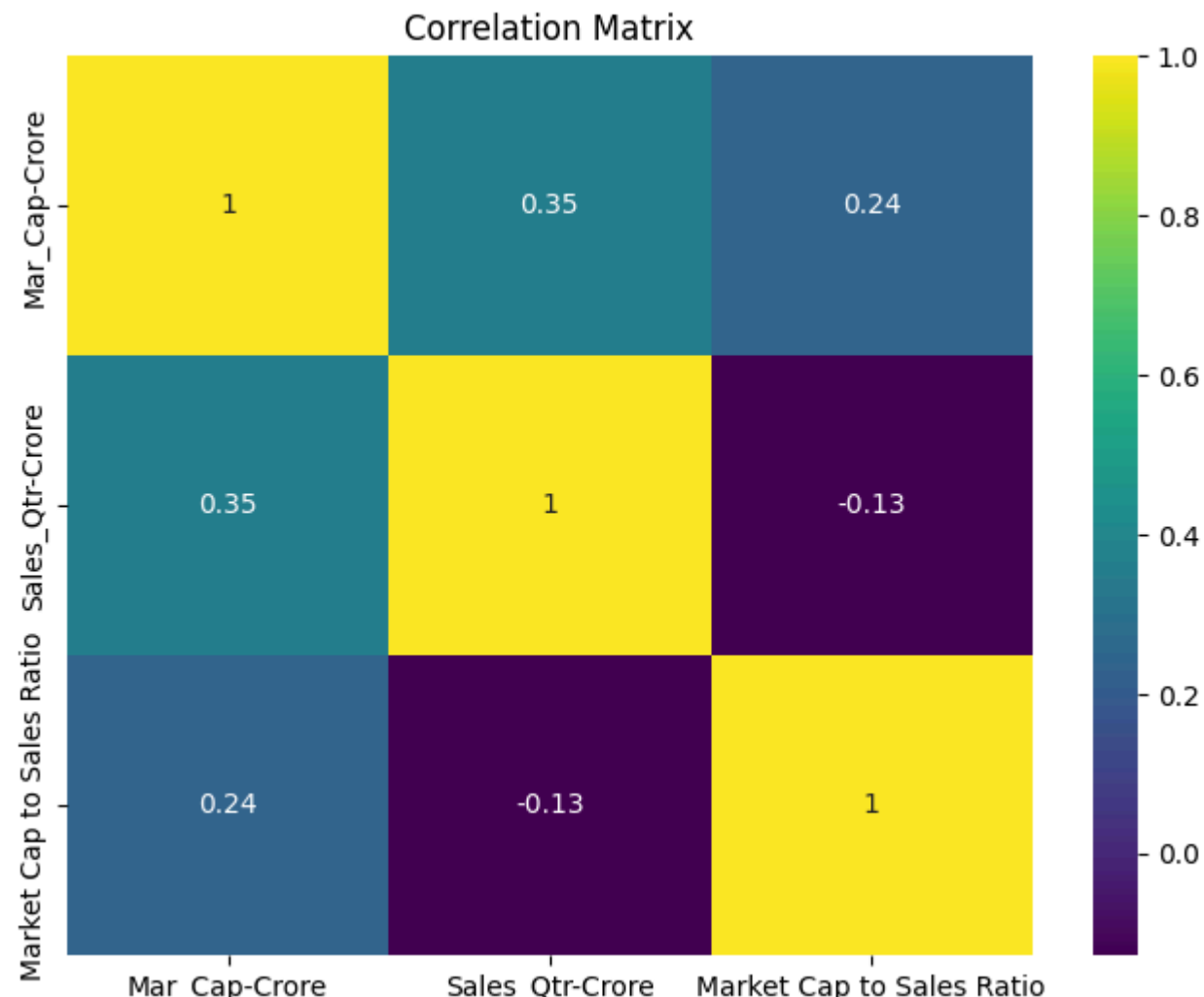
```
In [60]: plt.figure(figsize=(14, 6))
plt.subplot(1, 2, 1)
sns.histplot(jk['Mar_Cap-Crore'], kde=True)
plt.title('Market Capitalization Distribution')
plt.subplot(1, 2, 2)
sns.histplot(jk['Sales_Qtr-Crore'], kde=True)
plt.title('Quarterly Sales Distribution')
plt.tight_layout()
plt.show()
```



```
In [61]: plt.figure(figsize=(10, 6))
sns.scatterplot(x='Sales_Qtr-Crore', y='Mar_Cap-Crore', data=jk, color='green')
plt.title('Market Cap vs Quarterly Sales')
plt.xlabel('Quarterly Sales (Crores)')
plt.ylabel('Market Cap (Crores)')
plt.show()
```



```
In [84]: plt.figure(figsize=(8, 6))
sns.heatmap(crltn, annot=True, cmap='viridis')
plt.title('Correlation Matrix')
plt.show()
```



Top Performance

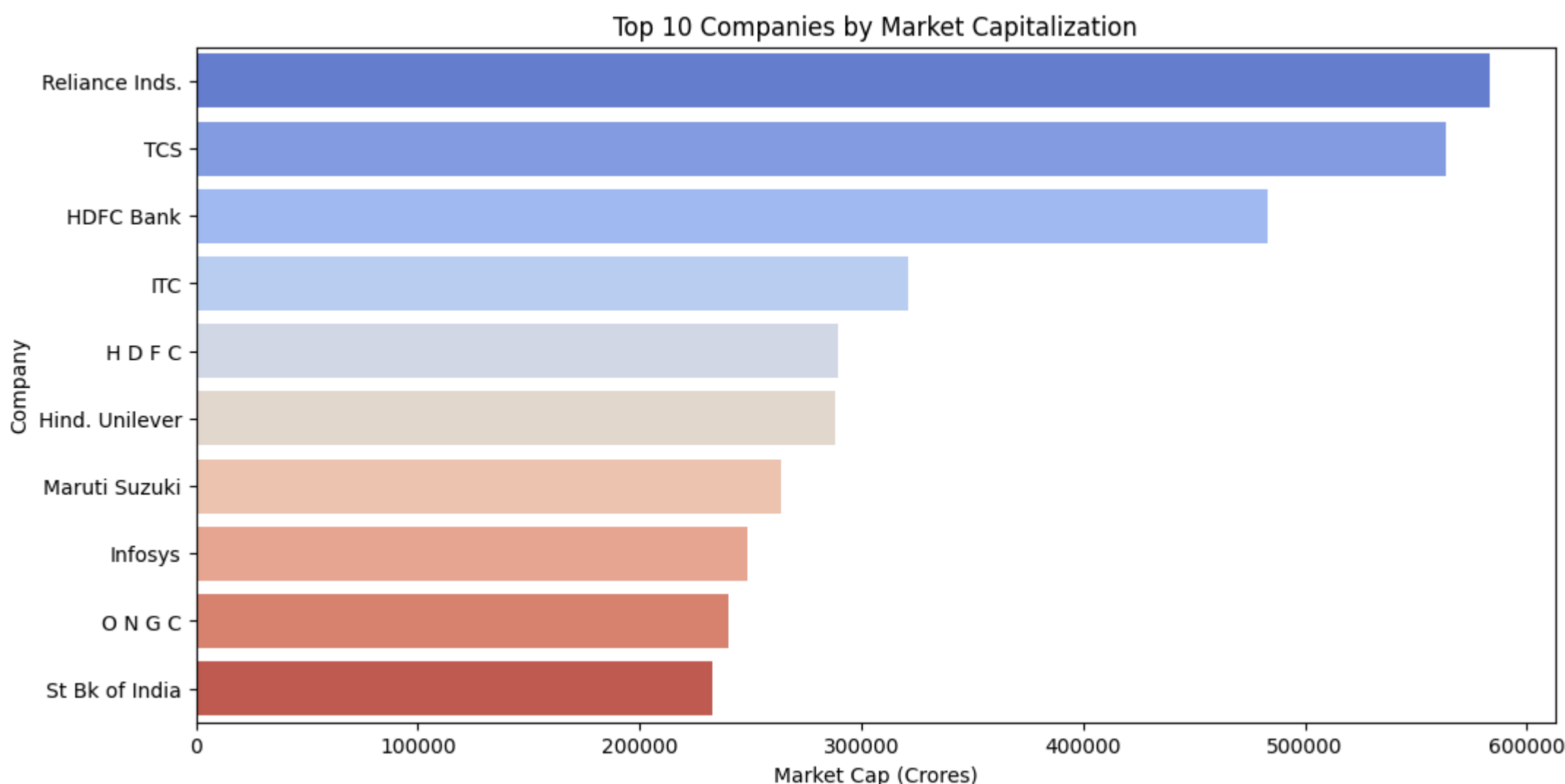
```
In [66]: top_market_cap = jk.nlargest(10, 'Mar_Cap-Crore')
top_sales = jk.nlargest(10, 'Sales_Qtr-Crore')
```

```
In [67]: top_market_cap[['Name', 'Mar_Cap-Crore']]
```

Out[67]:

	Name	Mar_Cap-Crore
0	Reliance Inds.	583436.72
1	TCS	563709.84
2	HDFC Bank	482953.59
3	ITC	320985.27
4	H D F C	289497.37
5	Hind. Unilever	288265.26
6	Maruti Suzuki	263493.81
7	Infosys	248320.35
8	O N G C	239981.50
9	St Bk of India	232763.33

```
In [87]: plt.figure(figsize=(12, 6))
sns.barplot(x='Mar_Cap-Crore', y='Name', data=top_market_cap, hue='Name', palette='coolwarm')
plt.title('Top 10 Companies by Market Capitalization')
plt.xlabel('Market Cap (Crores)')
plt.ylabel('Company')
plt.show()
```



```
In [68]:
```

Out[68]:

	Name	Sales_Qtr-Crore
23	Tata Motors	74156.70
54	H P C L	57474.25
40	Tata Steel	32464.14
13	Larsen & Toubro	28747.45
22	Vedanta	24361.00
8	O N G C	22995.88
12	Coal India	21643.28
6	Maruti Suzuki	19283.20
38	JSW Steel	17861.00
7	Infosys	17794.00

```
In [88]: plt.figure(figsize=(12, 6))
sns.barplot(x='Sales_Qtr-Crore', y='Name', data=top_sales, hue='Name', palette='viridis')
plt.title('Top 10 Companies by Quarterly Sales')
plt.xlabel('Quarterly Sales (Crores)')
plt.ylabel('Company')
plt.show()
```

