

```
In [1]: import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import numpy as np
```

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In [2]: df = pd.read_csv('/Users/nadiiahryhoruk/Desktop/results.csv')
```

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In [3]: df.head(10)
```

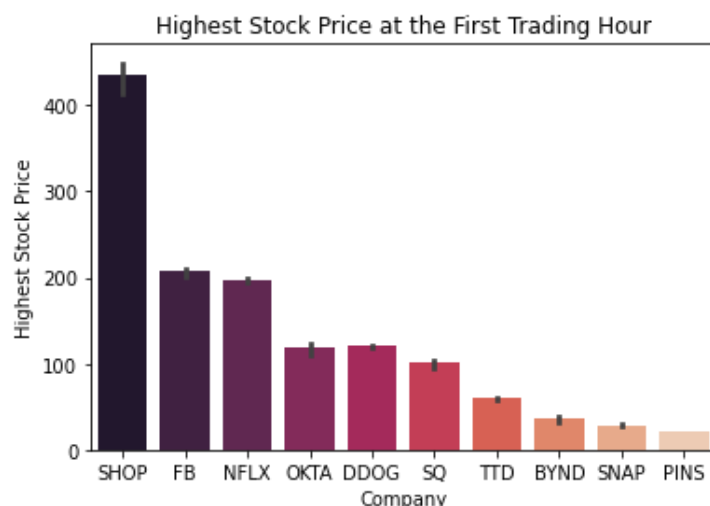
```
Out[3]:
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	company_name	high_price_hour	hour_of_day	ts
0	BYND	37.80	9	2022-05-02 09:55:00-04:00
1	BYND	37.99	10	2022-05-02 10:30:00-04:00
2	BYND	37.59	11	2022-05-02 11:30:00-04:00
3	BYND	37.33	12	2022-05-02 12:20:00-04:00
4	BYND	36.57	13	2022-05-02 13:05:00-04:00
5	BYND	36.95	14	2022-05-02 14:50:00-04:00
6	BYND	38.33	15	2022-05-02 15:55:00-04:00
7	BYND	24.37	16	2022-05-20 16:00:00-04:00
8	DDOG	123.33	9	2022-05-02 09:55:00-04:00
9	DDOG	122.58	10	2022-05-02 10:00:00-04:00

Highest Stock Price at the First Trading Hour

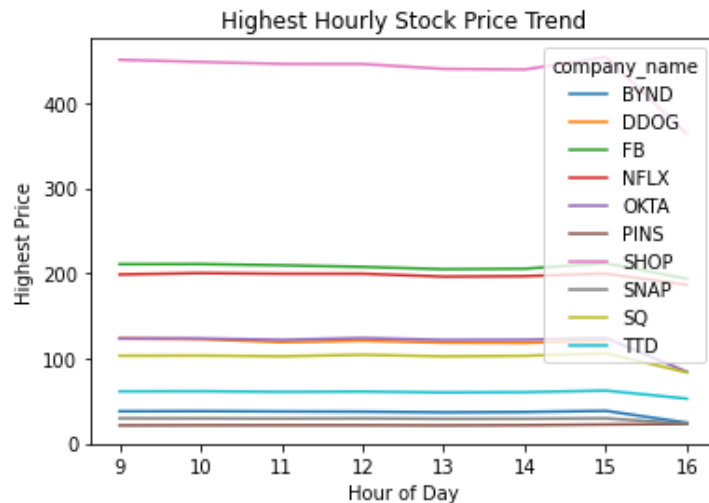
```
In [4]: dfHour = df
sns.barplot(x = 'company_name',
            y = 'high_price_hour',
            data = dfHour.sort_values(by=['high_price_hour'],
                                      ascending=False).reset_index(drop=True),
            palette = "rocket")
).set(title = 'Highest Stock Price at the First Trading Hour',
      xlabel='Company',
      ylabel='Highest Stock Price')
```

```
Out[4]: [Text(0.5, 1.0, 'Highest Stock Price at the First Trading Hour'),
Text(0.5, 0, 'Company'),
Text(0, 0.5, 'Highest Stock Price')]
```



Highest Hourly Stock Price Trend

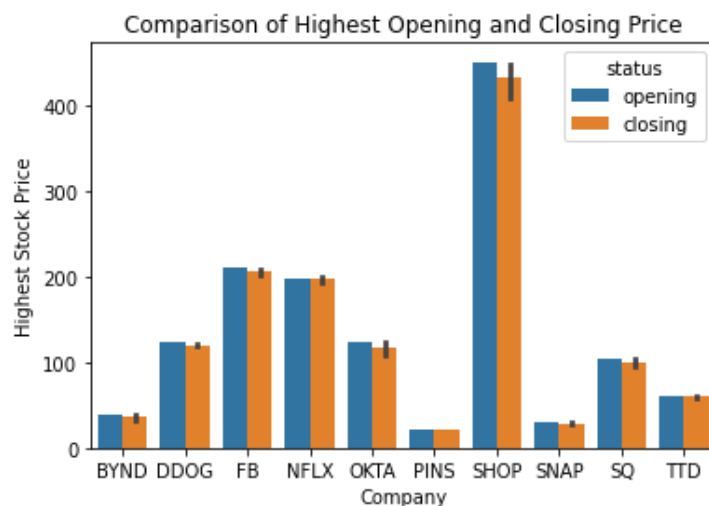
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In [5]: sns.lineplot(data = df,
                    x = "hour_of_day",
                    y = "high_price_hour",
                    hue = "company_name",
                    ).set(title = 'Highest Hourly Stock Price Trend',
                        xlabel='Hour of Day',
                        ylabel='Highest Price');
```



Comparison of Opening and Closing Price

```
In [6]: df.query('hour_of_day == 9 | hour_of_day == 15')
df['status'] = np.where(df['hour_of_day'] == 9, 'opening', 'closing')
sns.barplot(data=df.reset_index(drop=True),
            x="company_name",
            y="high_price_hour",
            hue='status')
.set(title='Comparison of Highest Opening and Closing Price',
    xlabel = "Company",
    ylabel="Highest Stock Price")
```

```
Out[6]: [Text(0.5, 1.0, 'Comparison of Highest Opening and Closing Price'),
Text(0.5, 0, 'Company'),
Text(0, 0.5, 'Highest Stock Price')]
```



Average Highest Stock Price

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In [7]: dfAvg = df.groupby('company_name').mean()['high_price_hour'].reset_index(name='average_price')
sns.barplot(x='company_name',
            y='average_price',
            data=dfAvg.sort_values(by=['average_price'],
                                   ascending=False).reset_index(drop=True),
            palette="PuOr_r"
            ).set(title='Average Highest Stock Price',
                 xlabel="Company",
                 ylabel="Average Stock Price")

```

```

Out[7]: [Text(0.5, 1.0, 'Average Highest Stock Price'),
Text(0.5, 0, 'Company'),
Text(0, 0.5, 'Average Stock Price')]

```

