exp_3_vis_tips

February 17, 2025

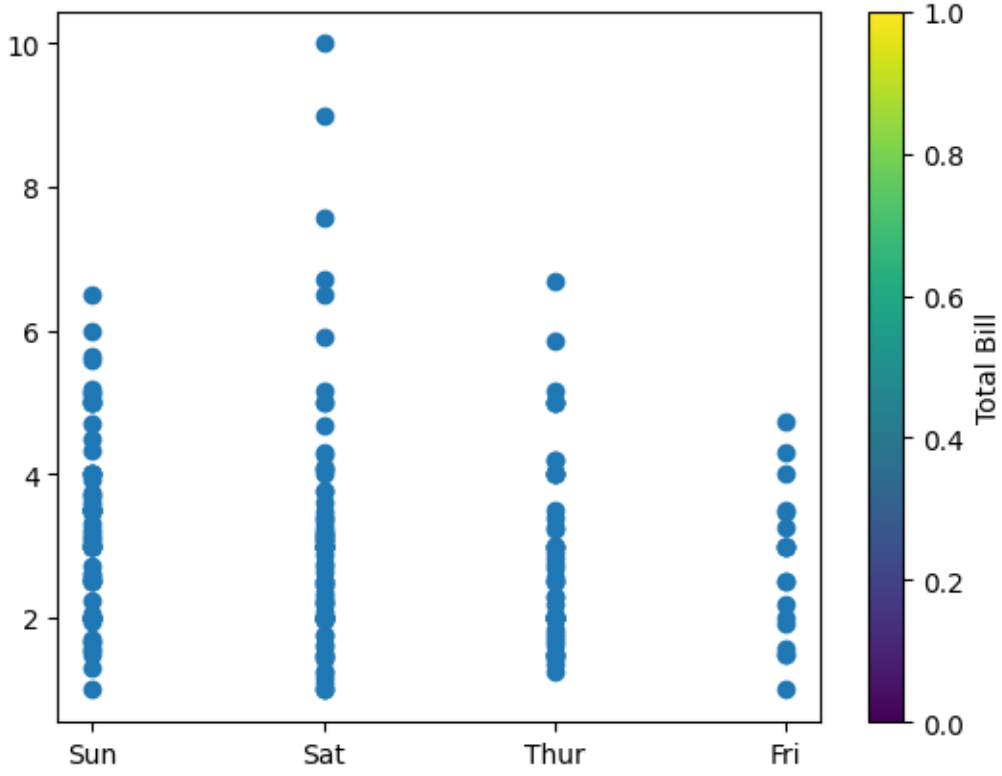
1 Experiment 3: Data Visualization with Seaborn and Matplotlib

- Name: **Anas Muhammmed Sahil**
- Date: 23-01-2025
- Roll Number: 20242AIE0010

[28]:
```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

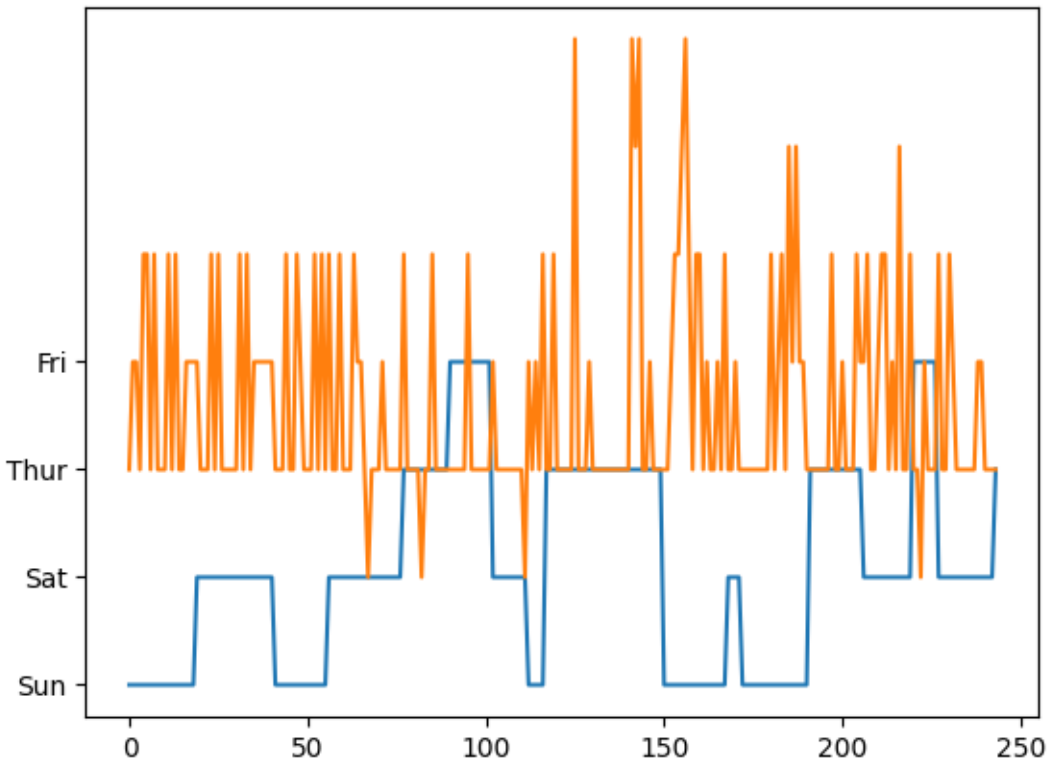
[29]:
```
tips = pd.read_csv("data/tips.csv")
scatter = plt.scatter(tips['day'], tips['tip'])
plt.colorbar(scatter, label='Total Bill')
```

[29]:
```
<matplotlib.colorbar.Colorbar at 0x7fcb371a5950>
```



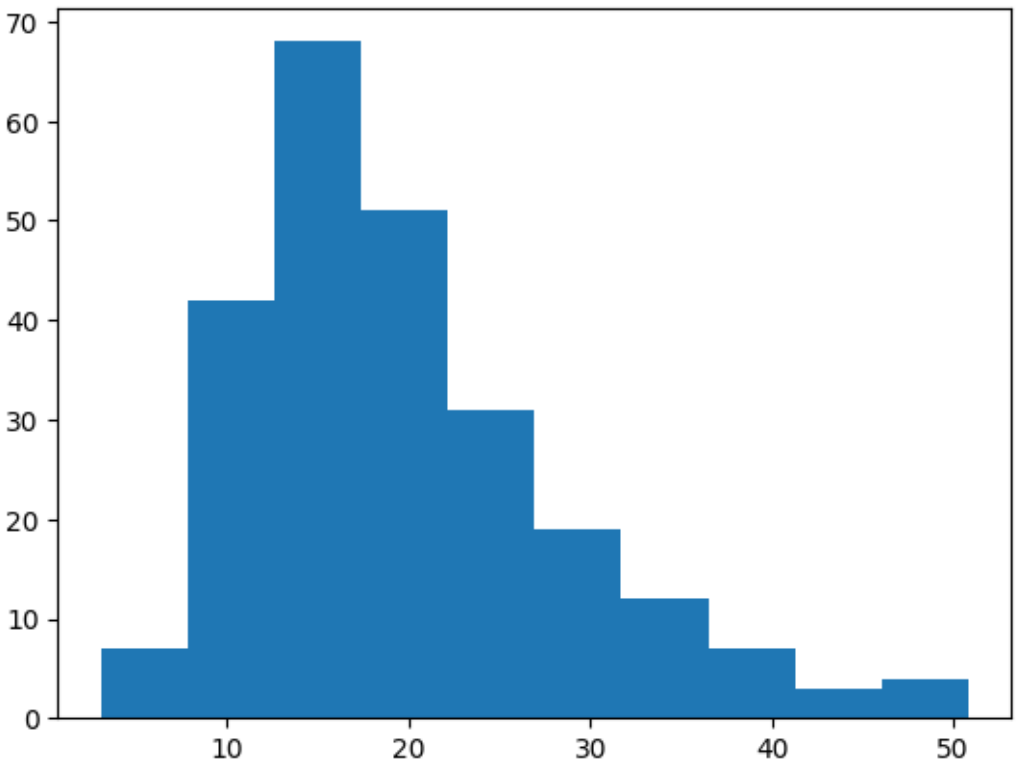
[30]:
```
plt.plot(tips["day"])
plt.plot(tips["size"])
```

[30]:
```
[<matplotlib.lines.Line2D at 0x7fcb3720fc50>]
```



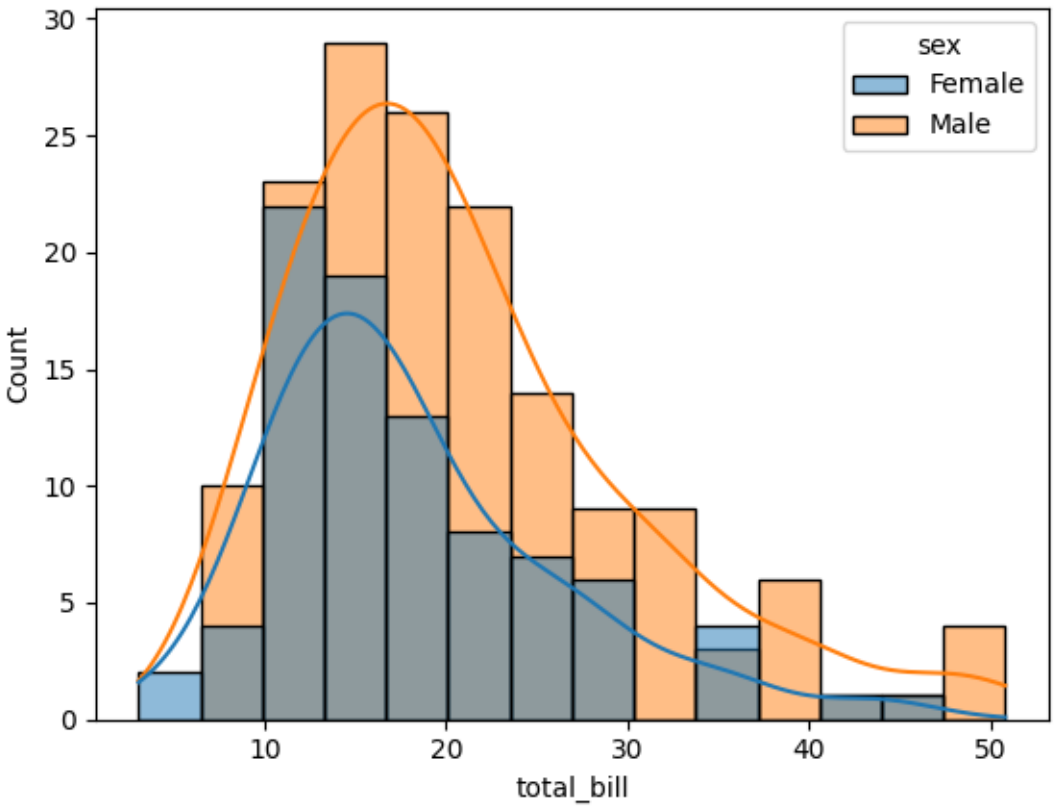
[31]:
```
plt.hist(tips["total_bill"])
```

[31]:
```
(array([ 7., 42., 68., 51., 31., 19., 12.,  7.,  3.,  4.]),
 array([ 3.07 ,  7.844, 12.618, 17.392, 22.166, 26.94 , 31.714, 36.488,
        41.262, 46.036, 50.81 ]),
 <BarContainer object of 10 artists>)
```



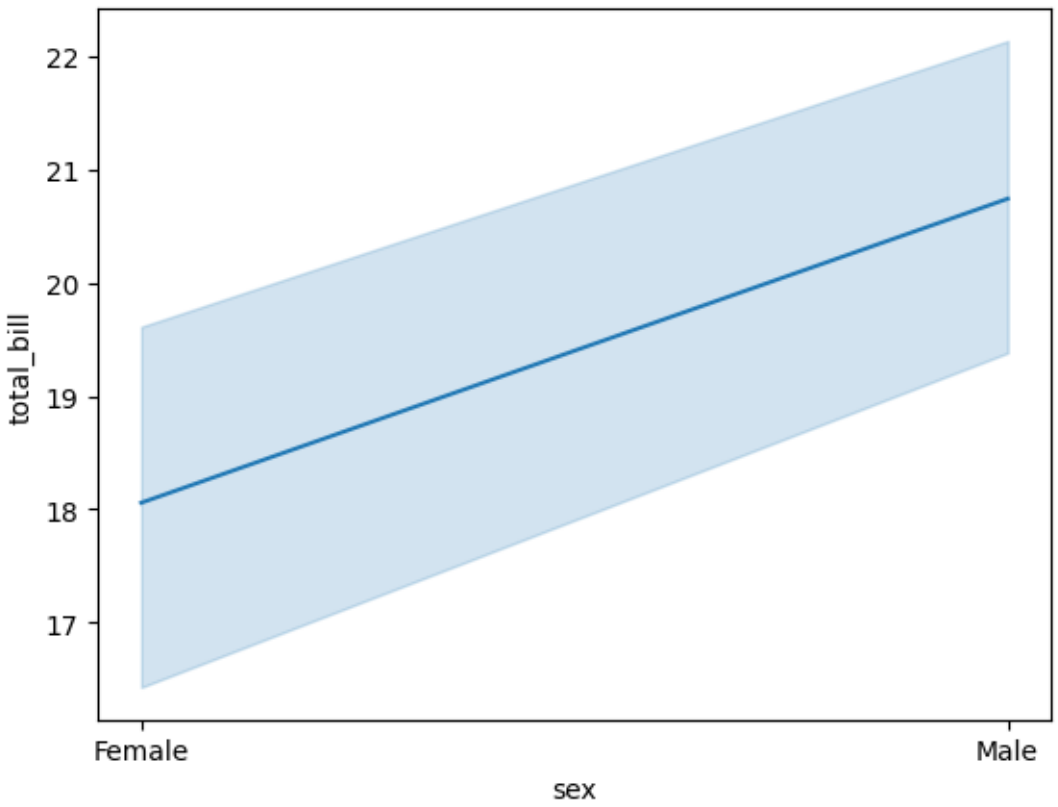
[33]:
```
# Kernel Density Estimate
sns.histplot(x="total_bill", kde=True, hue="sex", data=tips)
```

[33]: <Axes: xlabel='total_bill', ylabel='Count'>



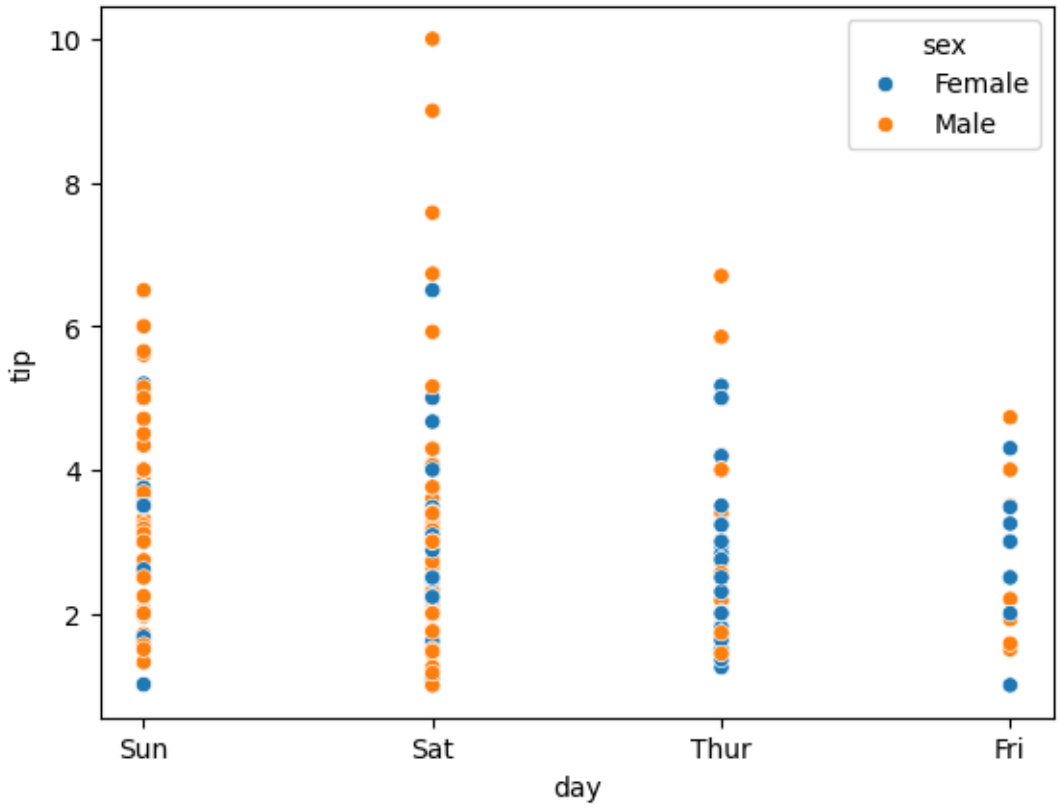
[34]:
```
sns.lineplot(x="sex", y="total_bill", data=tips)
```

[34]:
```
<Axes: xlabel='sex', ylabel='total_bill'>
```



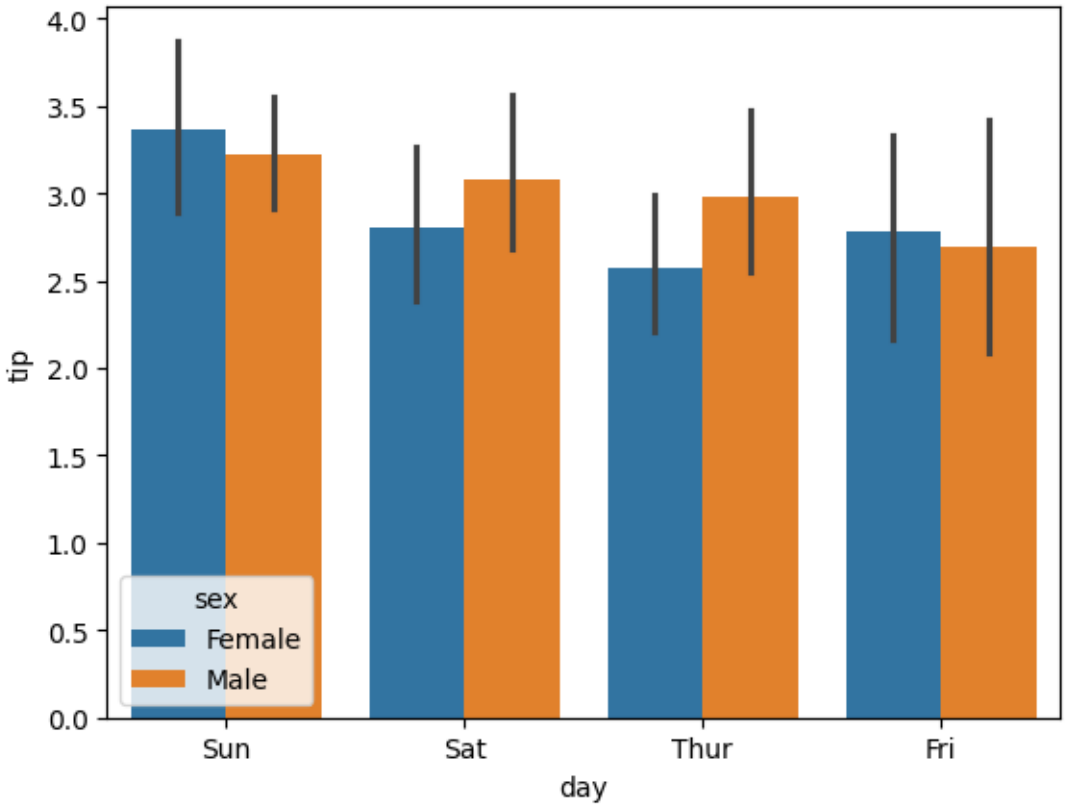
[35]:
```
sns.scatterplot(x="day", y="tip", hue="sex", data=tips)
```

[35]: <Axes: xlabel='day', ylabel='tip'>



[36]:
```
sns.barplot(x="day", y="tip", hue="sex", data=tips)
```

[36]: <Axes: xlabel='day', ylabel='tip'>


4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
tip
sex
Female
Male
Sun
Sat
Thur
Fri
day

[ ]: