# Data Visualization with Python

## Session-4

CLARUSWAY©
WAY TO REINVENT YOURSELF

# Seaborn-2

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I've completed the **pre-class content.**

Yes

No

Students choose an option

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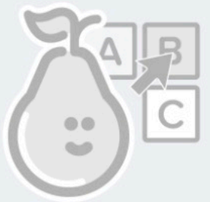


**No Multiple Choice Response**
You didn't answer this question

# Categorical Plots

- barplot
- countplot
- violinplot
- stripplot
- swarmplot
- boxplot
- boxenplot

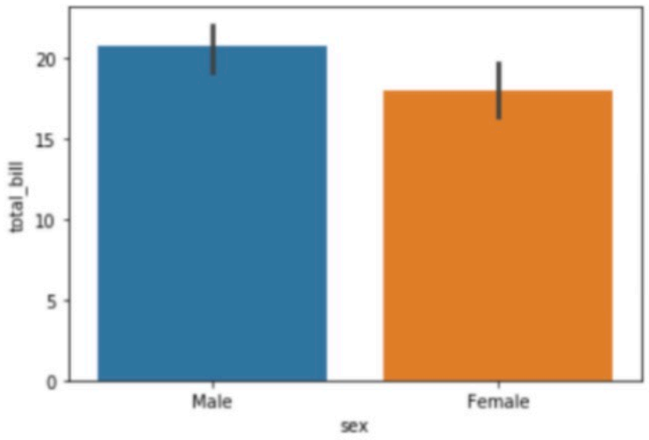
# Categorical Plots

Plots are basically used for visualizing the relationship between variables. Those variables can be either be completely numerical or a category like a group, class or division.

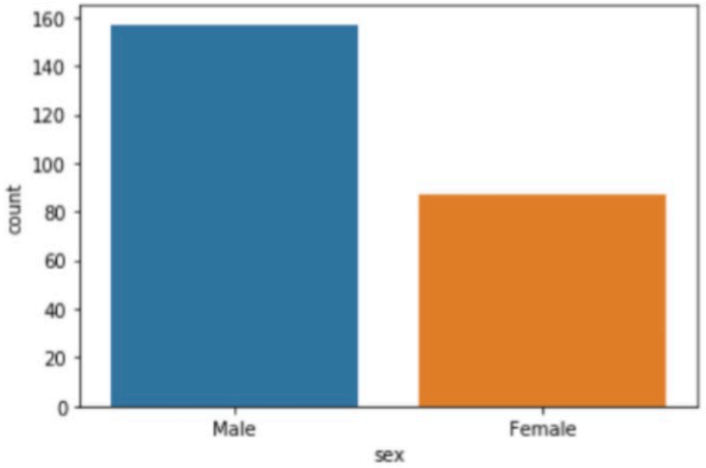
Seaborn besides being a statistical plotting library also provides some default datasets. We will be using one such default dataset called **'tips'**. The 'tips' dataset contains information about people who probably had food at a restaurant and whether or not they left a tip for the waiters, their gender, whether they smoke and so on.

# Categorical Plots

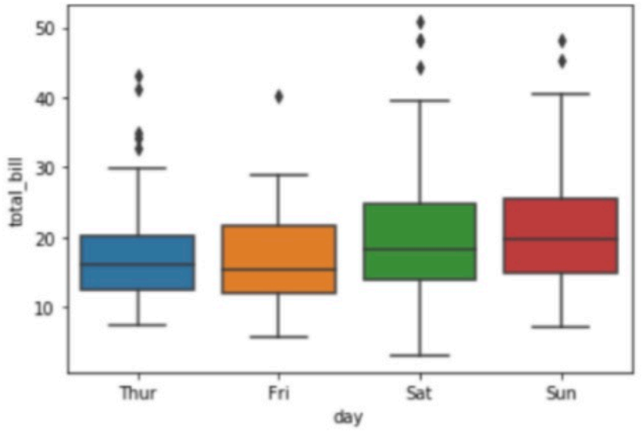
**barplot**




**countplot**

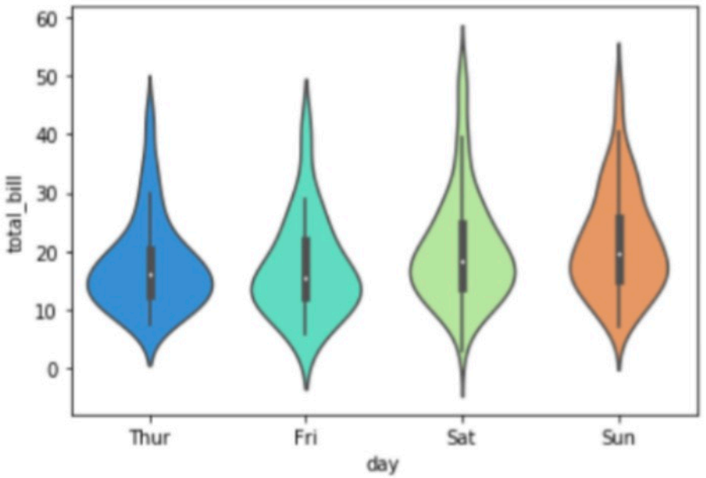



**boxplot**

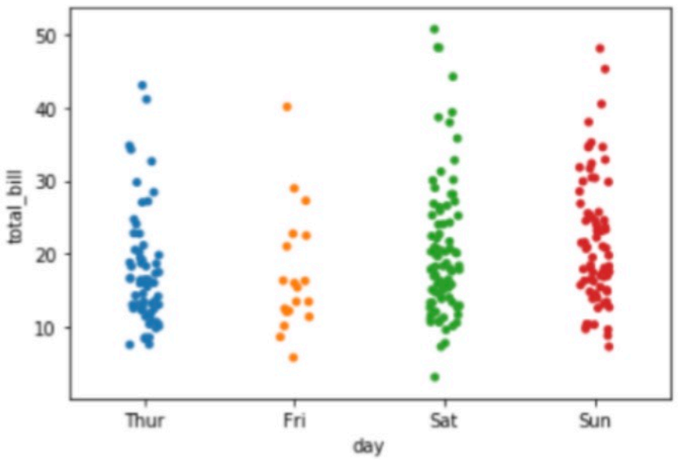


# Categorical Plots

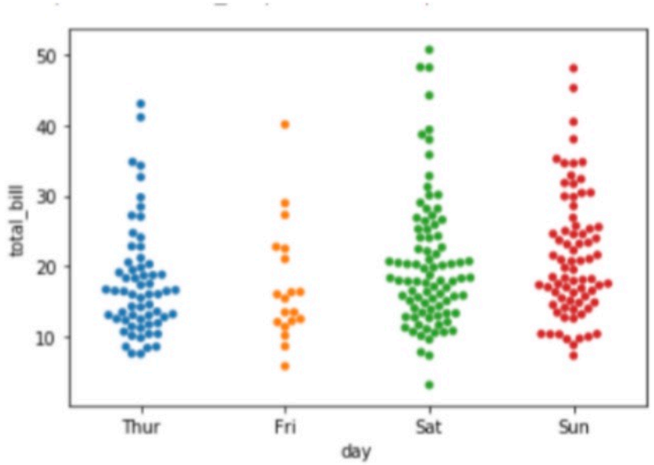
**violinplot**




**stripplot**



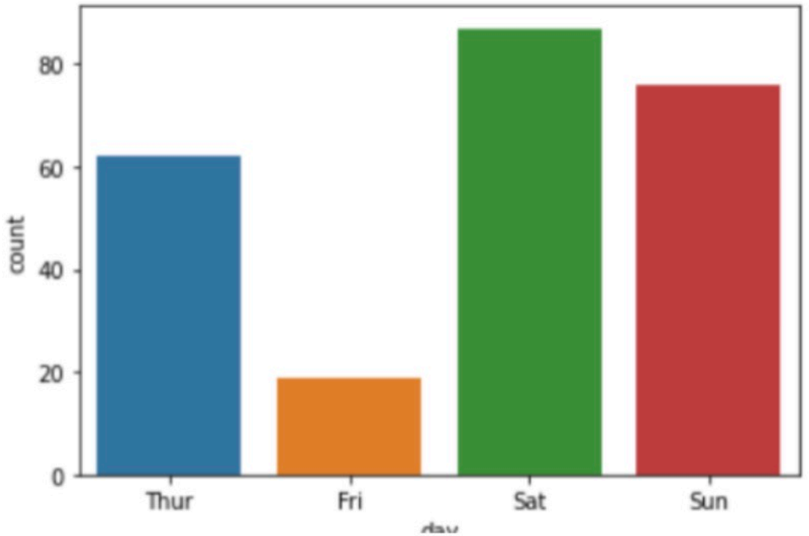

**swarmplot**

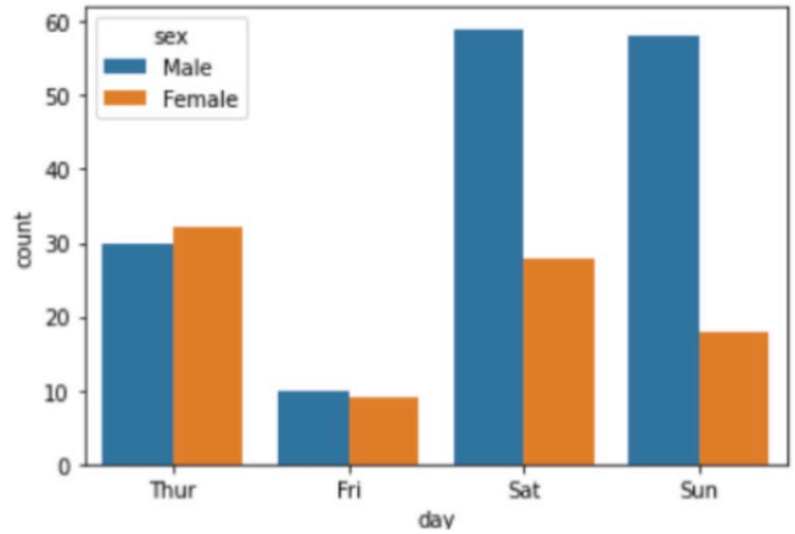


# Categorical Plots - countplot

```
import seaborn as sns
tips = sns.load_dataset("tips")
sns.countplot(x='day',data=tips)
sns.countplot(tips['day'])
```

| | total_bill | tip | sex | smoker | day | time | size |
|---|---|---|---|---|---|---|---|
| **0** | 16.99 | 1.01 | Female | No | Sun | Dinner | 2 |
| **1** | 10.34 | 1.66 | Male | No | Sun | Dinner | 3 |
| **2** | 21.01 | 3.50 | Male | No | Sun | Dinner | 3 |
| **3** | 23.68 | 3.31 | Male | No | Sun | Dinner | 2 |
| **4** | 24.59 | 3.61 | Female | No | Sun | Dinner | 4 |

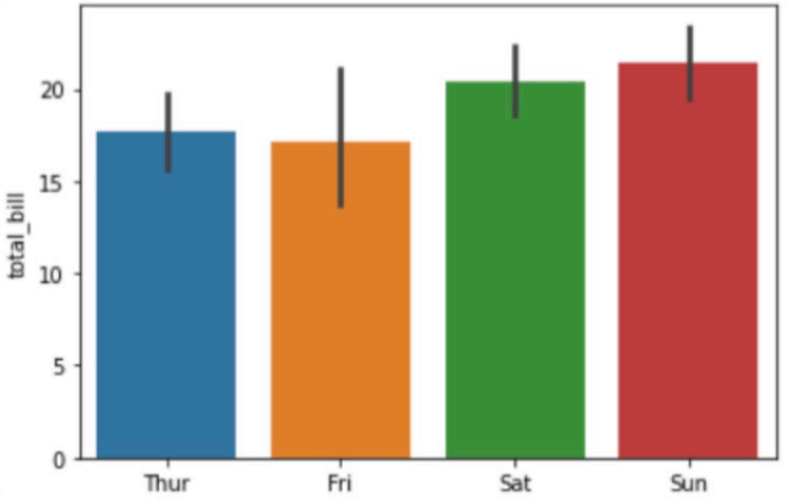


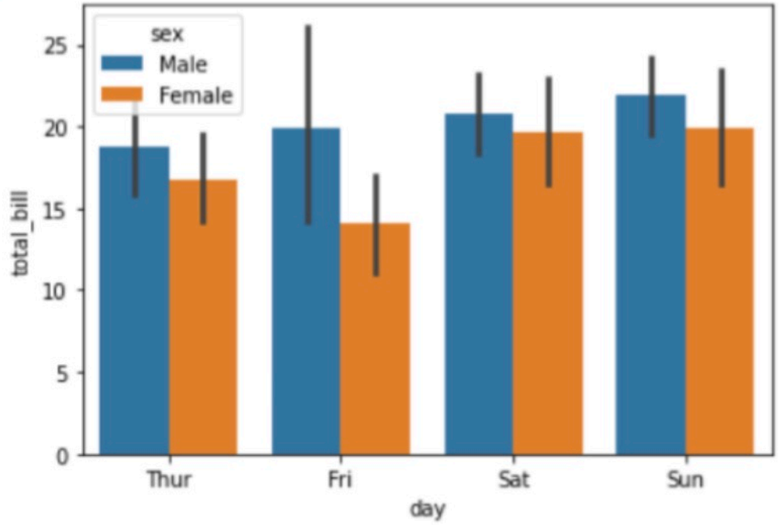



# Categorical Plots - barplot

```
import seaborn as sns
tips = sns.load_dataset("tips")
sns.barplot(x='day', y="total_bill", data=tips)
sns.barplot(x='day', y="total_bill", data=tips, hue='sex')
```

| | total_bill | tip | sex | smoker | day | time | size |
|---|---|---|---|---|---|---|---|
| **0** | 16.99 | 1.01 | Female | No | Sun | Dinner | 2 |
| **1** | 10.34 | 1.66 | Male | No | Sun | Dinner | 3 |
| **2** | 21.01 | 3.50 | Male | No | Sun | Dinner | 3 |
| **3** | 23.68 | 3.31 | Male | No | Sun | Dinner | 2 |
| **4** | 24.59 | 3.61 | Female | No | Sun | Dinner | 4 |

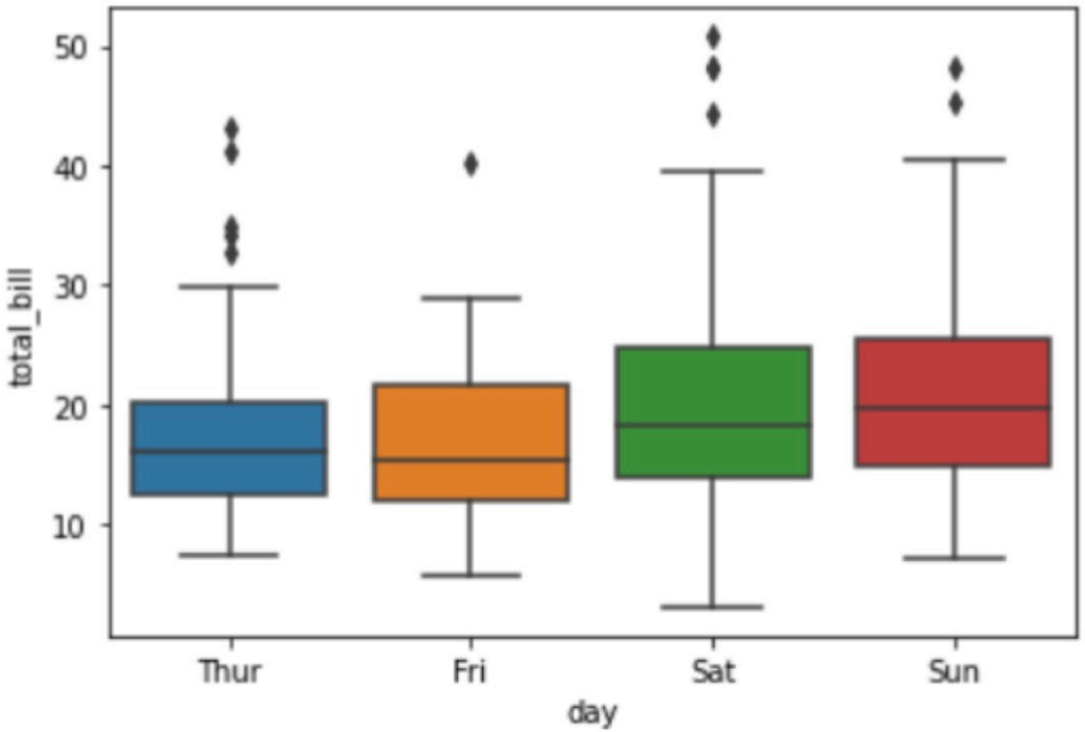


# Categorical Plots - boxplot

```
import seaborn as sns
tips = sns.load_dataset("tips")
sns.boxplot(x='day',
y="total_bill", data=tips)
```

| | total_bill | tip | sex | smoker | day | time | size |
|---|---|---|---|---|---|---|---|
| **0** | 16.99 | 1.01 | Female | No | Sun | Dinner | 2 |
| **1** | 10.34 | 1.66 | Male | No | Sun | Dinner | 3 |
| **2** | 21.01 | 3.50 | Male | No | Sun | Dinner | 3 |
| **3** | 23.68 | 3.31 | Male | No | Sun | Dinner | 2 |
| **4** | 24.59 | 3.61 | Female | No | Sun | Dinner | 4 |



# Categorical Plots - violinplot

```
import seaborn as sns
tips =
sns.load_dataset("tips")
sns.violinplot(x='day',y="tota
l_bill",      data=tips)
```

| | total_bill | tip | sex | smoker | day | time | size |
|---|---|---|---|---|---|---|---|
| **0** | 16.99 | 1.01 | Female | No | Sun | Dinner | 2 |
| **1** | 10.34 | 1.66 | Male | No | Sun | Dinner | 3 |
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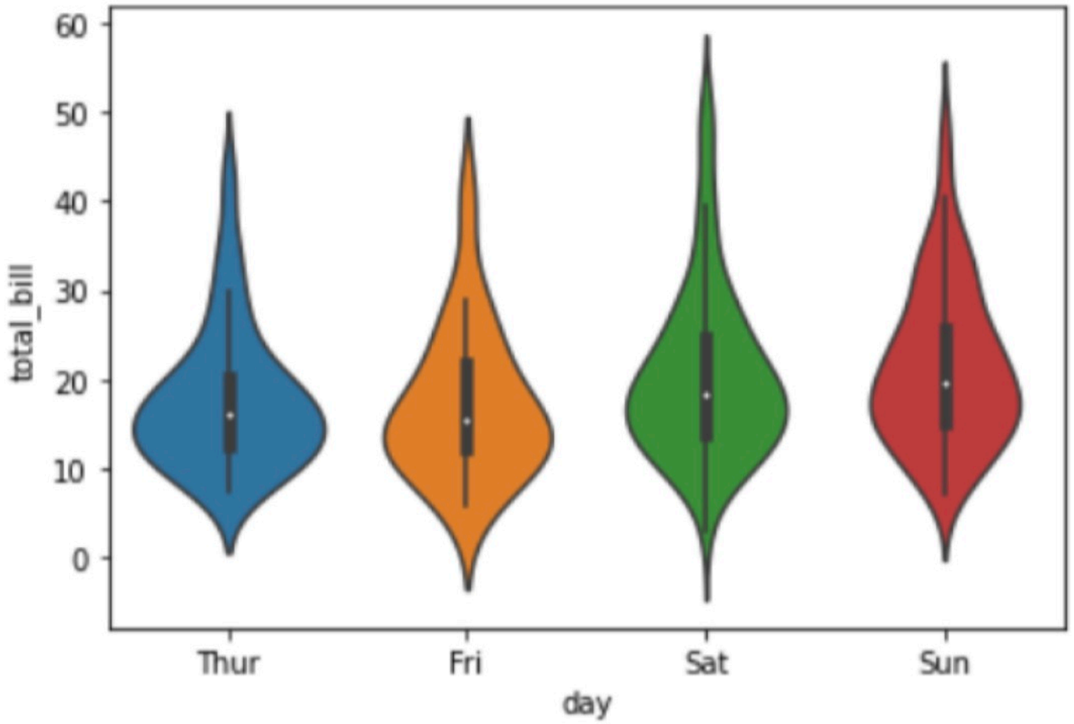
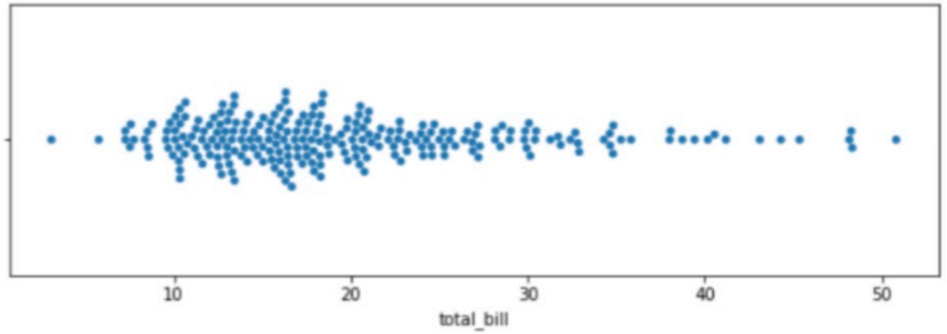
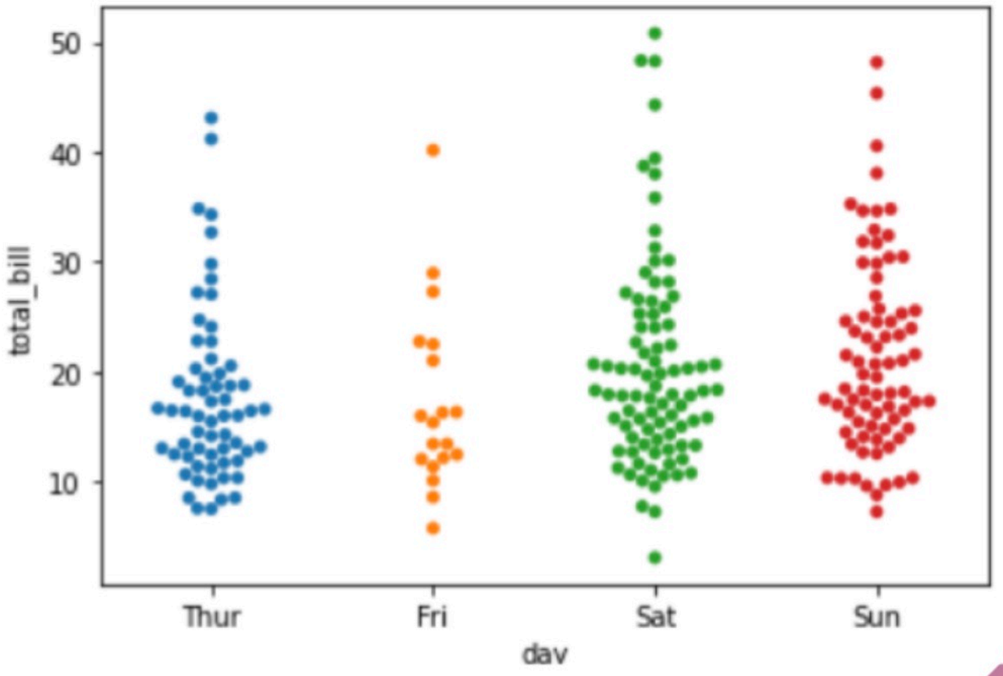


# Categorical Plots - swarmplot

```
import seaborn as sns
tips = sns.load_dataset("tips")
sns.swarmplot(x="total_bill",
data=tips)
sns.swarmplot(x="day",
y="total_bill",        data=tips)
```

| | total_bill | tip | sex | smoker | day | time | size |
|---|---|---|---|---|---|---|---|
| **0** | 16.99 | 1.01 | Female | No | Sun | Dinner | 2 |
| **1** | 10.34 | 1.66 | Male | No | Sun | Dinner | 3 |
| **2** | 21.01 | 3.50 | Male | No | Sun | Dinner | 3 |
| **3** | 23.68 | 3.31 | Male | No | Sun | Dinner | 2 |
| **4** | 24.59 | 3.61 | Female | No | Sun | Dinner | 4 |

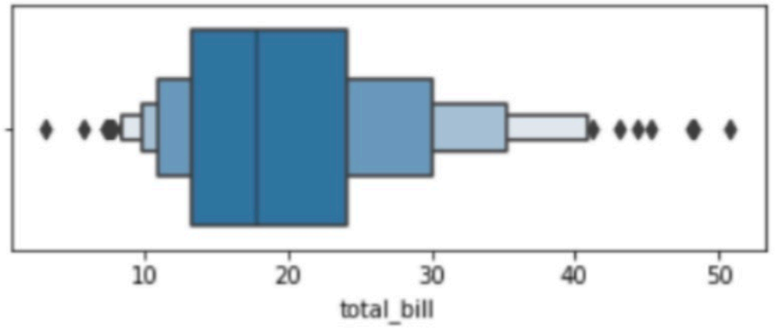


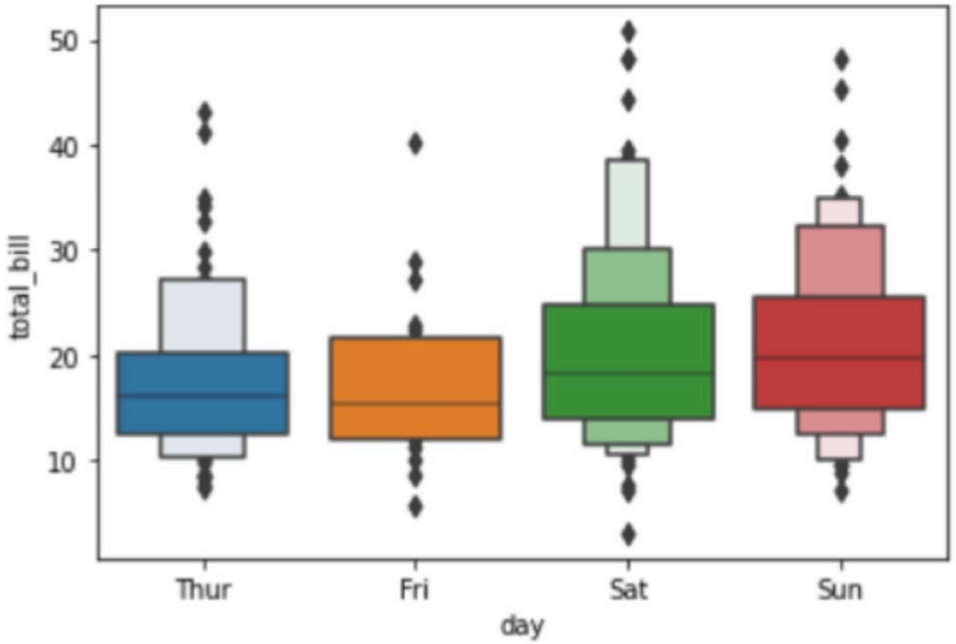



# Categorical Plots - boxenplot

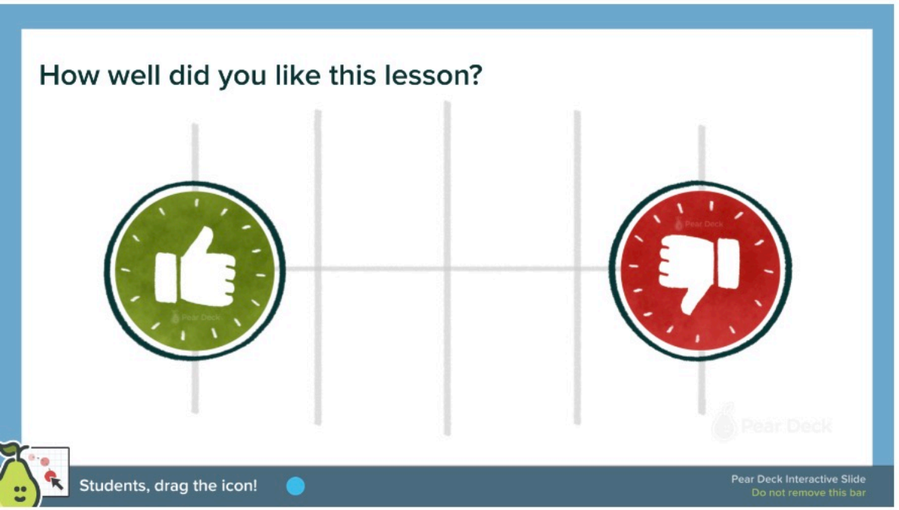
```
import seaborn as sns
tips = sns.load_dataset("tips")
sns.boxenplot(x="total_bill",
data=tips)
sns.boxenplot(x="day",
y="total_bill",      data=tips)
```

| | total_bill | tip | sex | smoker | day | time | size |
|---|---|---|---|---|---|---|---|
| **0** | 16.99 | 1.01 | Female | No | Sun | Dinner | 2 |
| **1** | 10.34 | 1.66 | Male | No | Sun | Dinner | 3 |
| **2** | 21.01 | 3.50 | Male | No | Sun | Dinner | 3 |
| **3** | 23.68 | 3.31 | Male | No | Sun | Dinner | 2 |
| **4** | 24.59 | 3.61 | Female | No | Sun | Dinner | 4 |




Kahoot!




**No Draggable™ Response**

You didn't answer this question