

# facet\_boxplot

January 16, 2022

## 0.0.1 Demo Boxplot

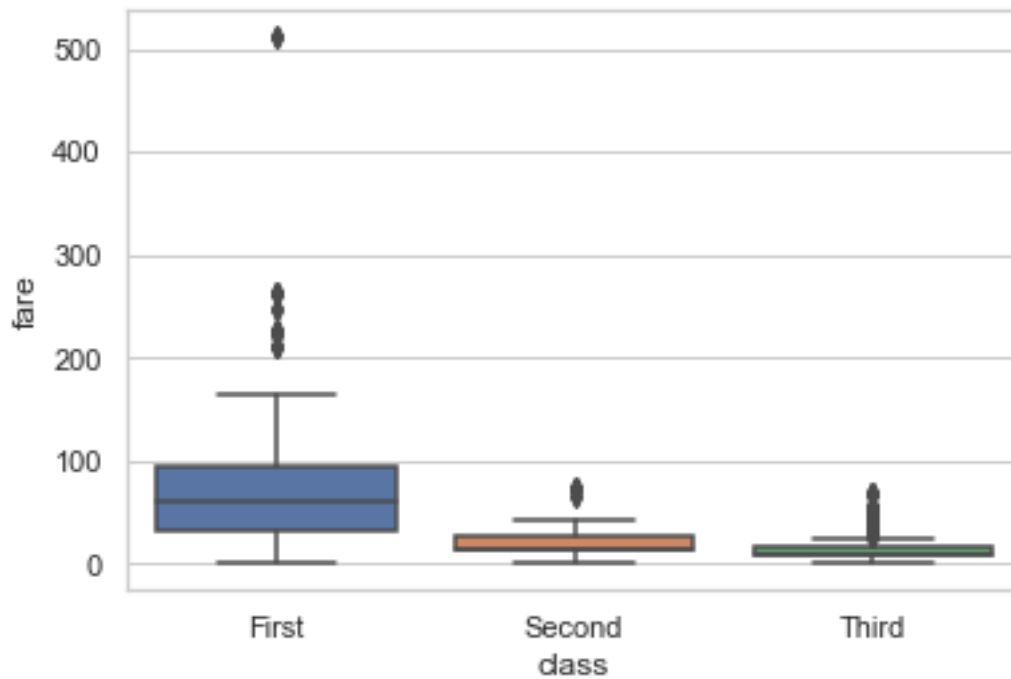
```
[ ]: import seaborn as sns

#Canvas Ballonn board
sns.set(style='whitegrid')

kashti = sns.load_dataset("titanic")

sns.boxplot(x="class",y="fare",data=kashti)

[ ]: <AxesSubplot:xlabel='class', ylabel='fare'>
```



## 0.0.2 Box plot on Dinner Data - (describe and indexed plot)

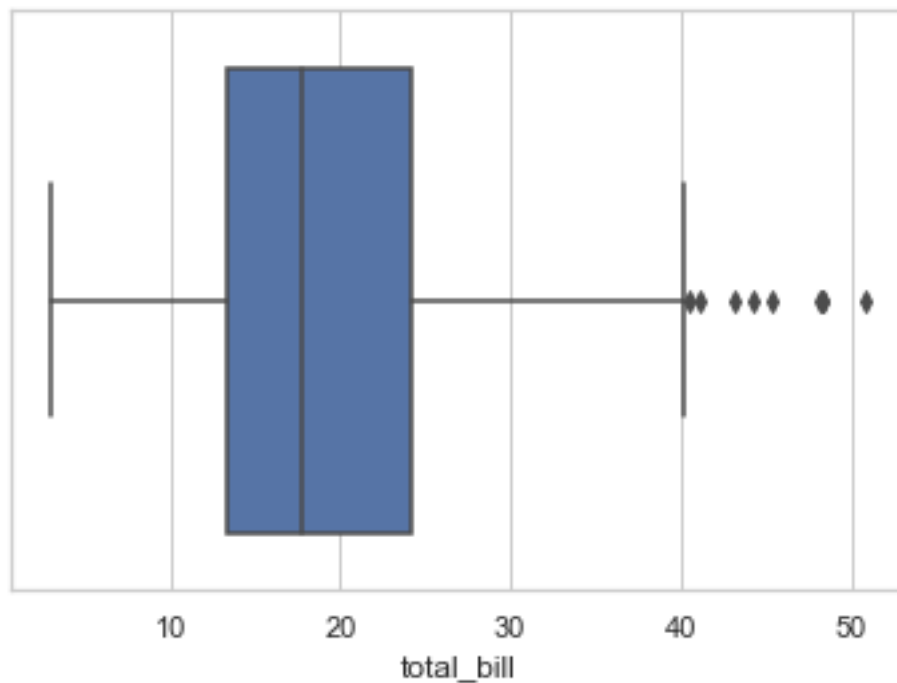
```
[ ]: import seaborn as sns
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd

#Canvas Ballonn board
sns.set(style='whitegrid')

tip = sns.load_dataset("tips")
# it is describing all numeric values
tip.describe()

sns.boxplot(x=tip["total_bill"],data=tip,saturation=0.8)
```

```
[ ]: <AxesSubplot:xlabel='total_bill'>
```



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

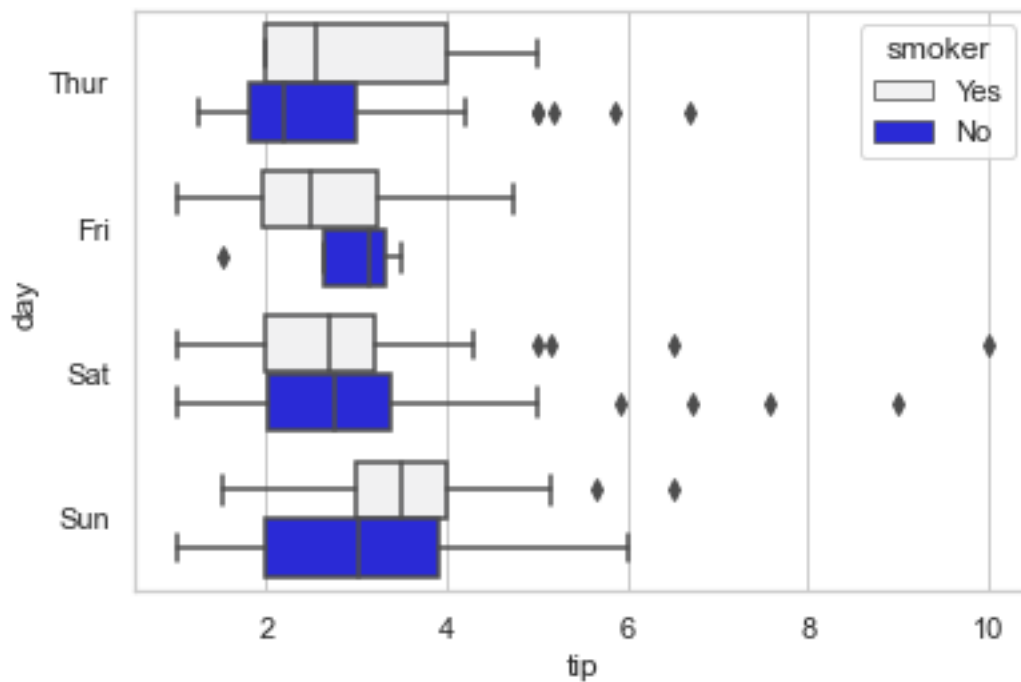
```
#Canvas Ballonn board
sns.set(style='whitegrid')

tip = sns.load_dataset("tips")
# it is describing all numeric values
tip.describe()

sns.boxplot(x="tip",y="day",hue="smoker",data=tip,saturation=0.
↪8,dodge=True,color="#1515eb")

#sns.boxplot(x="tip",y="day",hue="smoker",data=tip,saturation=0.
↪8,palette="Set2",dodge=False)
```

```
[ ]: <AxesSubplot:xlabel='tip', ylabel='day'>
```



### Assigning Customized colors to each HUE in Box plot

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

#Canvas Ballonn board
```

```

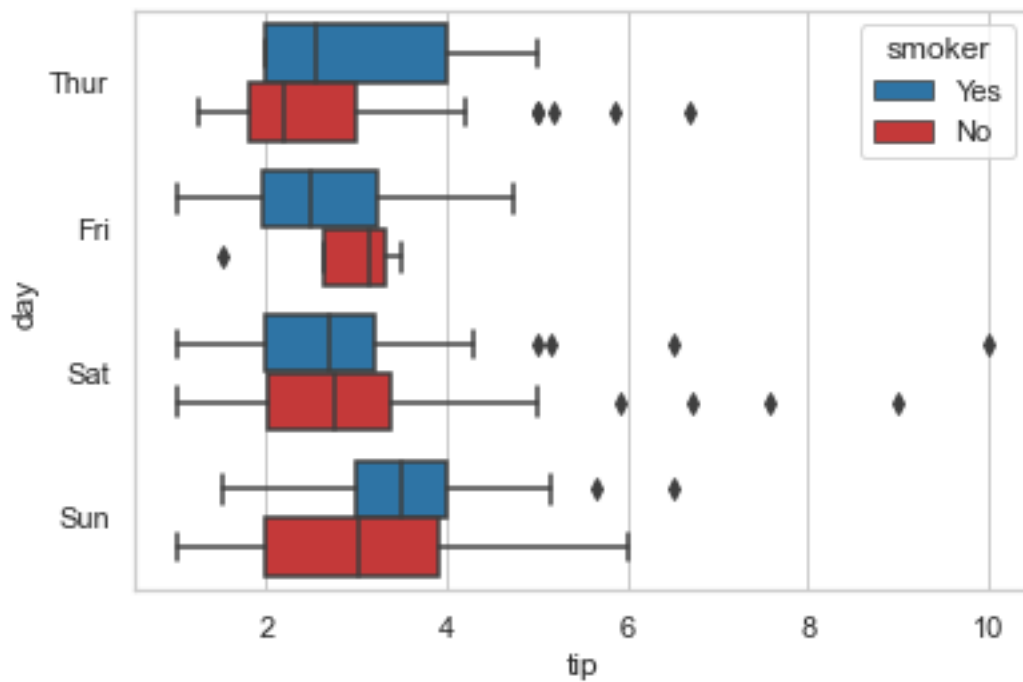
sns.set(style='whitegrid')

tip = sns.load_dataset("tips")
# it is describing all numeric values
tip.describe()
palette = {
    'Yes': 'tab:blue',
    'No': 'tab:red',
}

sns.boxplot(x="tip",y="day",hue="smoker",data=tip,saturation=0.
↪8,dodge=True,palette=palette,color="#1515eb")

```

```
[ ]: <AxesSubplot:xlabel='tip', ylabel='day'>
```



### 0.0.3 Box plot more design features

```

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

```

```

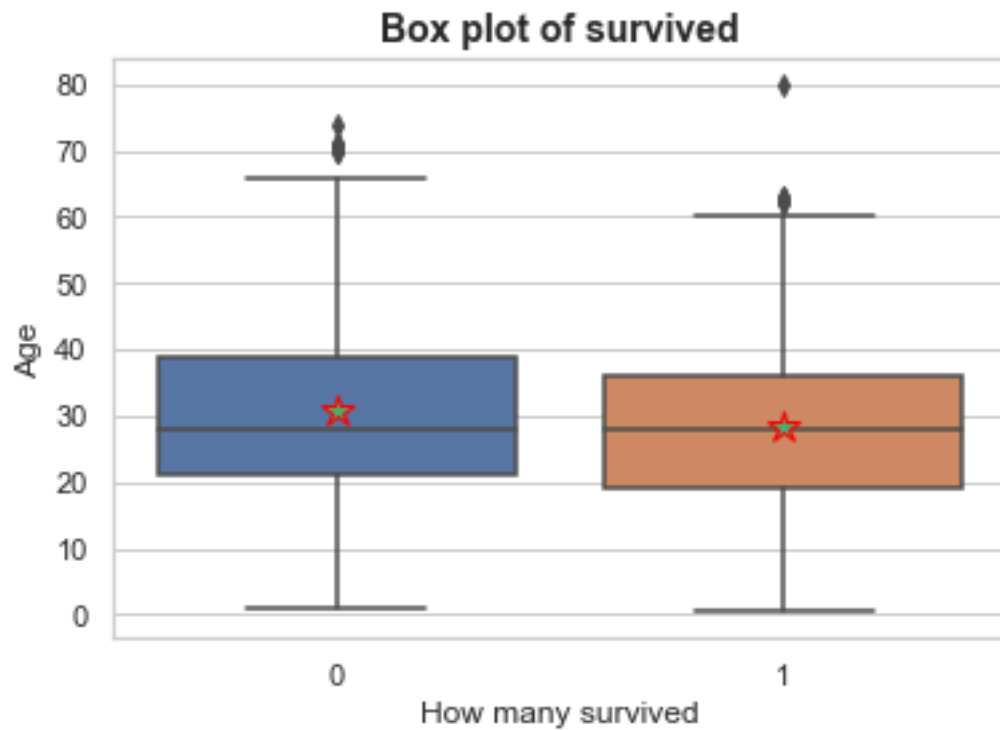
#Canvas Ballonn board
#sns.set(style='whitegrid')

kashti = sns.load_dataset("titanic")
kashti.head()

p1= sns.boxplot(x="survived",y="age",showmeans=True,meanprops={"marker":
    ↳"*","markersize":"12","markeredgcolor":"red"},data=kashti)
plt.xlabel("How many survived"),
plt.ylabel("Age")
plt.title("Box plot of survived",size=14,weight="bold")

plt.show()

```



#### 0.0.4 Facet grid in Boxplot

```

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

```

```

sns.set(style="whitegrid")
iris_vis = sns.load_dataset("iris")

fig, axes = plt.subplots(2, 2)

ax = sns.boxplot(x="species", y="petal_width", data=iris_vis,
                ax=axes[0,0])
ax = sns.boxplot(x="species", y="sepal_length", data=iris_vis,
                ax=axes[0,1])
ax = sns.boxplot(x="species", y="sepal_length", data=iris_vis,
                ax=axes[1,0])
ax = sns.boxplot(x="species", y="sepal_length", data=iris_vis,
                ax=axes[1,1])

#this is self created error for future learning
ax = sns.boxplot(x="species", y="petal_width", data=iris_vis, orient='v',
                ax=axes[2,1])

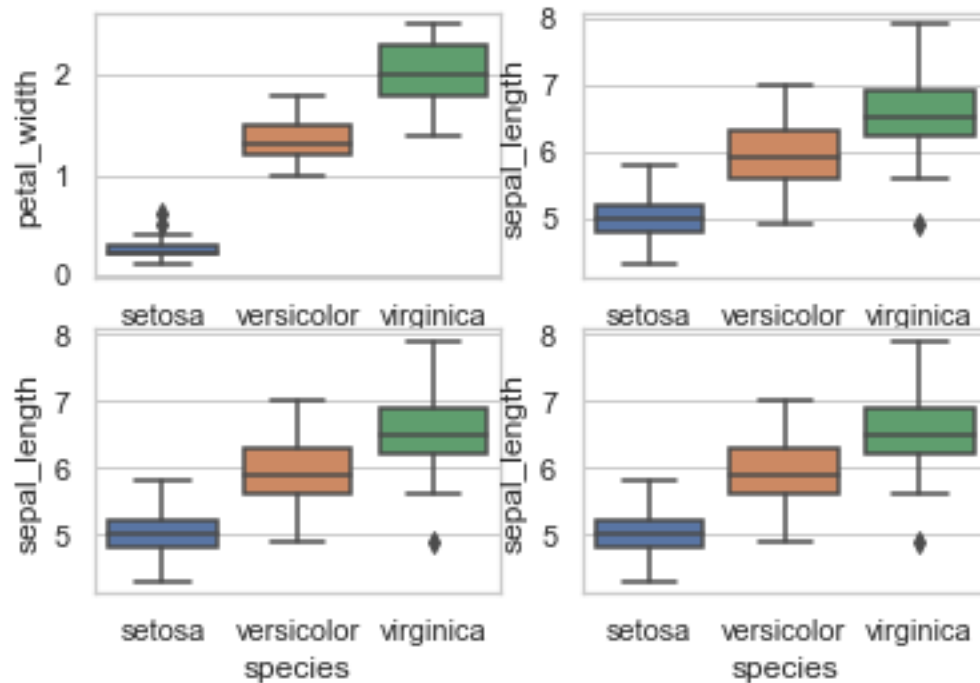
```

```

-----
IndexError                                Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_12492\461546390.py in <module>
    23 #this is self created error for future learning
    24 ax = sns.boxplot(x="species", y="petal_width", data=iris_vis, orient='v',
--> 25                        ax=axes[2,1])

IndexError: index 2 is out of bounds for axis 0 with size 2

```



### 0.0.5 Facet Grid Method 2

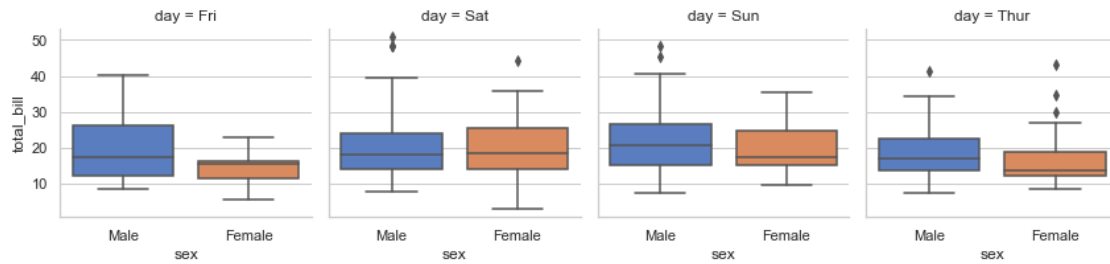
```
[ ]: import seaborn as sns, matplotlib.pyplot as plt

tips = sns.load_dataset('tips')
ordered_days = sorted(tips['day'].unique())
g = sns.FacetGrid(tips, col='day', col_order=ordered_days, col_wrap=4)

g.map(sns.boxplot, 'sex', 'total_bill', palette='muted')
for ax in g.axes.flatten():
    ax.tick_params(labelbottom=True)
plt.tight_layout()
plt.show()
```

C:\Users\dell7450\AppData\Local\Programs\Python\Python310\lib\site-packages\seaborn\axisgrid.py:670: UserWarning: Using the boxplot function without specifying `order` is likely to produce an incorrect plot.

```
warnings.warn(warning)
```



### Boxplot with Facetgrid (Cocept of Row Column)

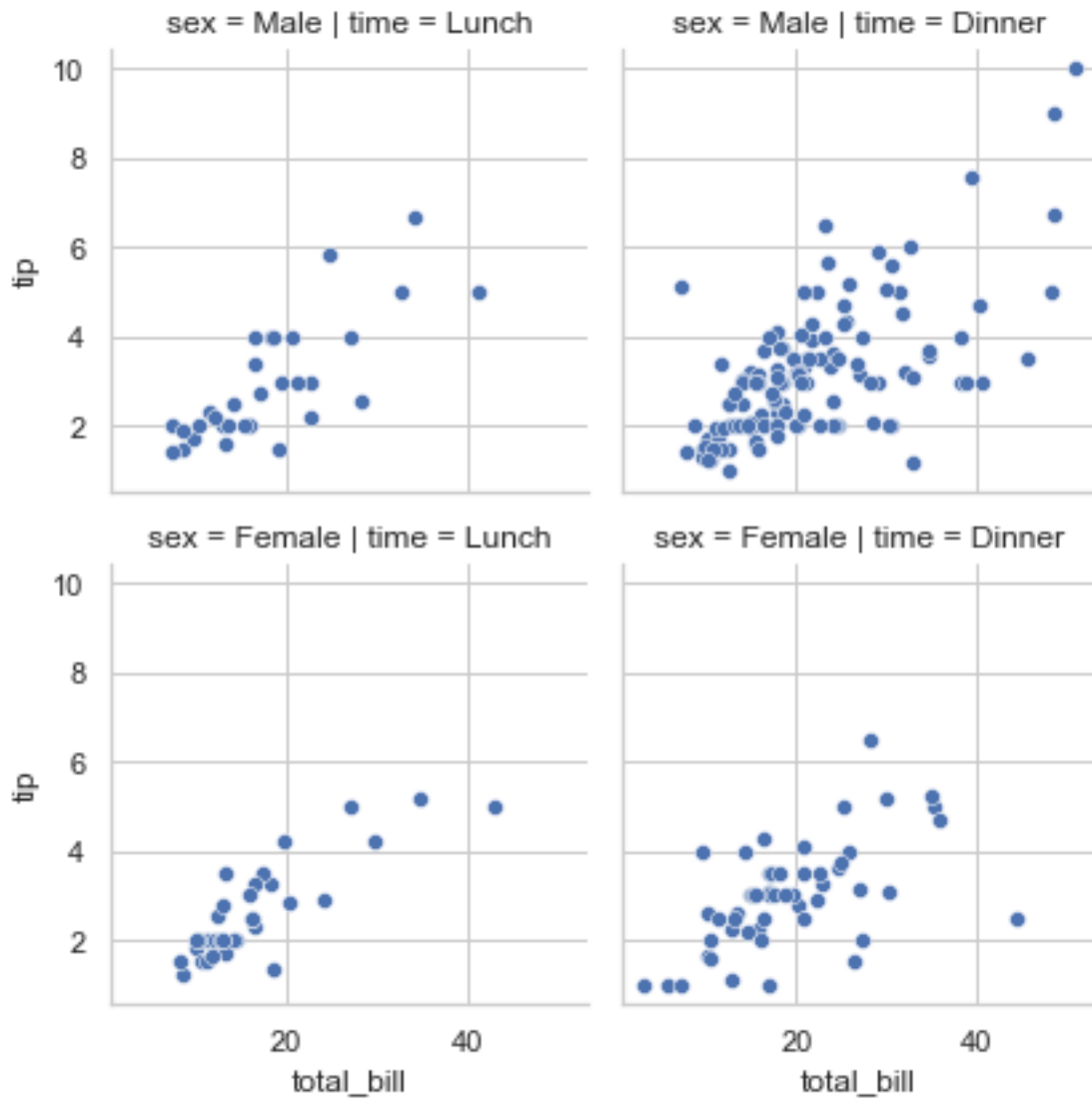
```
[ ]: import seaborn as sns
import matplotlib.pyplot as plt

tips = sns.load_dataset('tips')

g = sns.FacetGrid(tips, col="time", row="sex")
g.map(sns.scatterplot, "total_bill", "tip")
```

```
[ ]: <seaborn.axisgrid.FacetGrid at 0x22b2303d0c0>
```





## 1 Facet Wrap you have to understand