Module 02

Grids

Data Science Developer

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Grids

Grids are general types of plots that allow you to map plot types to rows and columns of a grid, this helps you create similar plots separated by features.

Imports and Data

```
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

```
iris = sns.load_dataset('iris')
```

```
iris.head()
```

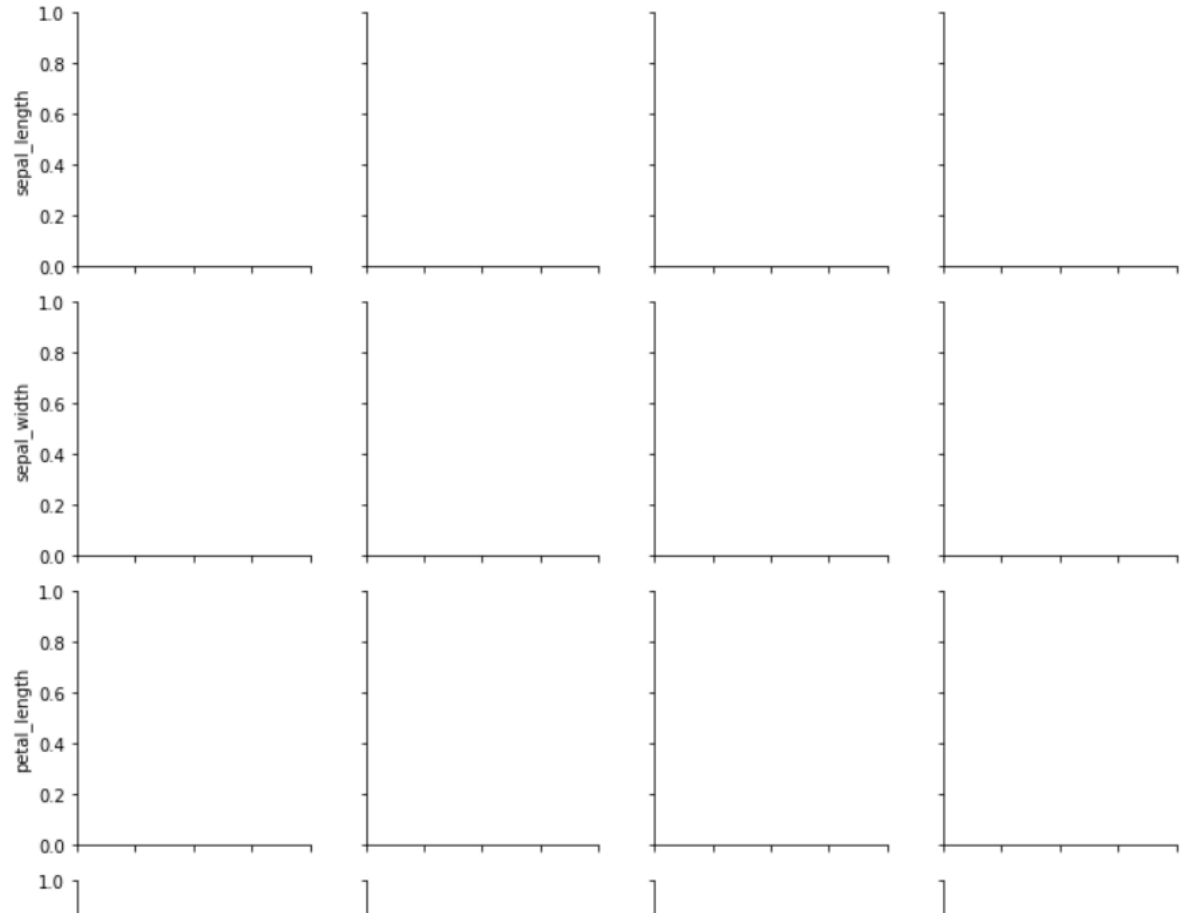
	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

PairGrid

Pairgrid is a subplot grid for plotting pairwise relationships in a dataset.

```
# Just the Grid
sns.PairGrid(iris)
```

```
<seaborn.axisgrid.PairGrid at 0x171de04a390>
```



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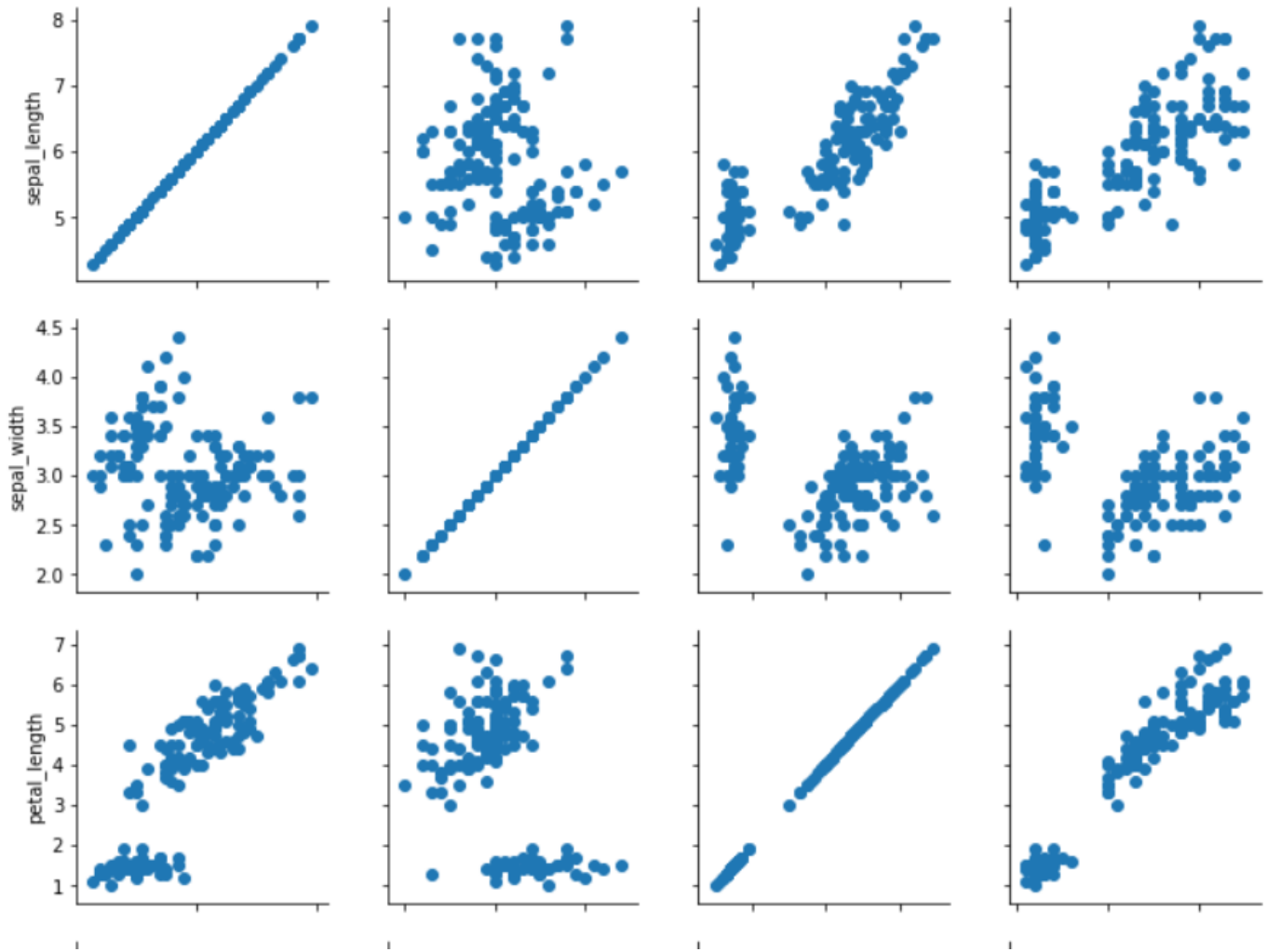
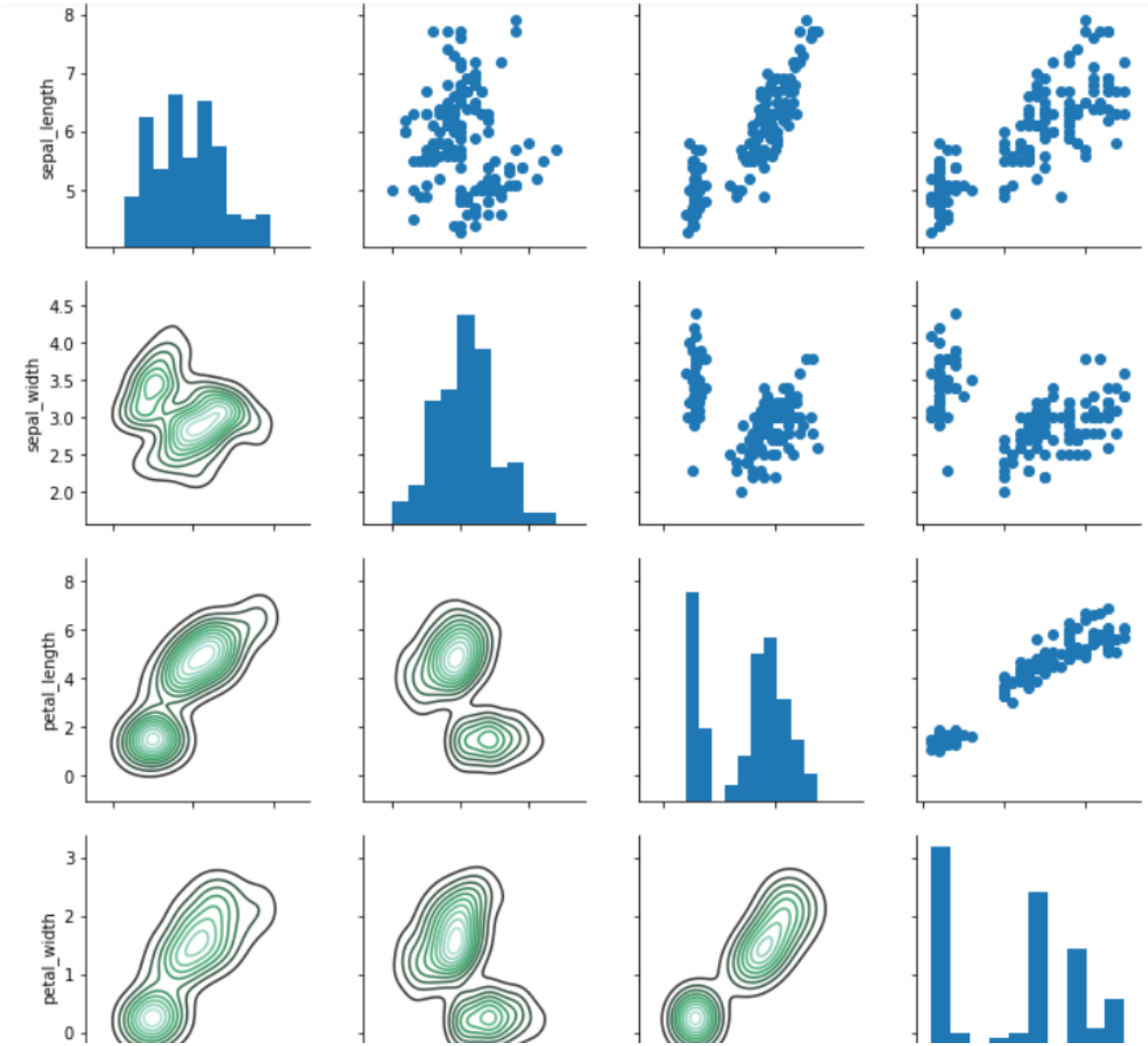
```
# Then you map to the grid
g = sns.PairGrid(iris)
g.map(plt.scatter)
```

```
<seaborn.axisgrid.PairGrid at 0x171e32f39e8>
```



```
# Map to upper,lower, and diagonal
g = sns.PairGrid(iris)
g.map_diag(plt.hist)
g.map_upper(plt.scatter)
g.map_lower(sns.kdeplot)
```



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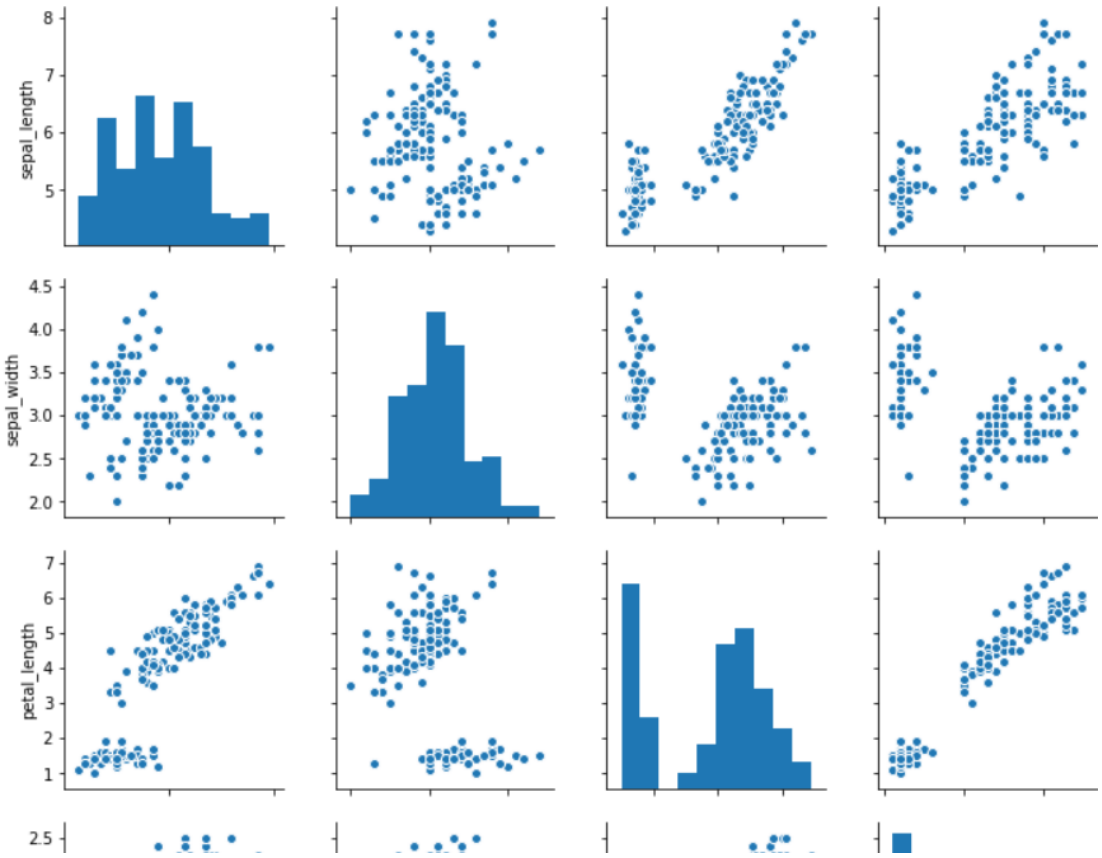
pairplot

pairplot is a simpler version of PairGrid (you'll use quite often)

```
sns.pairplot(iris)
```



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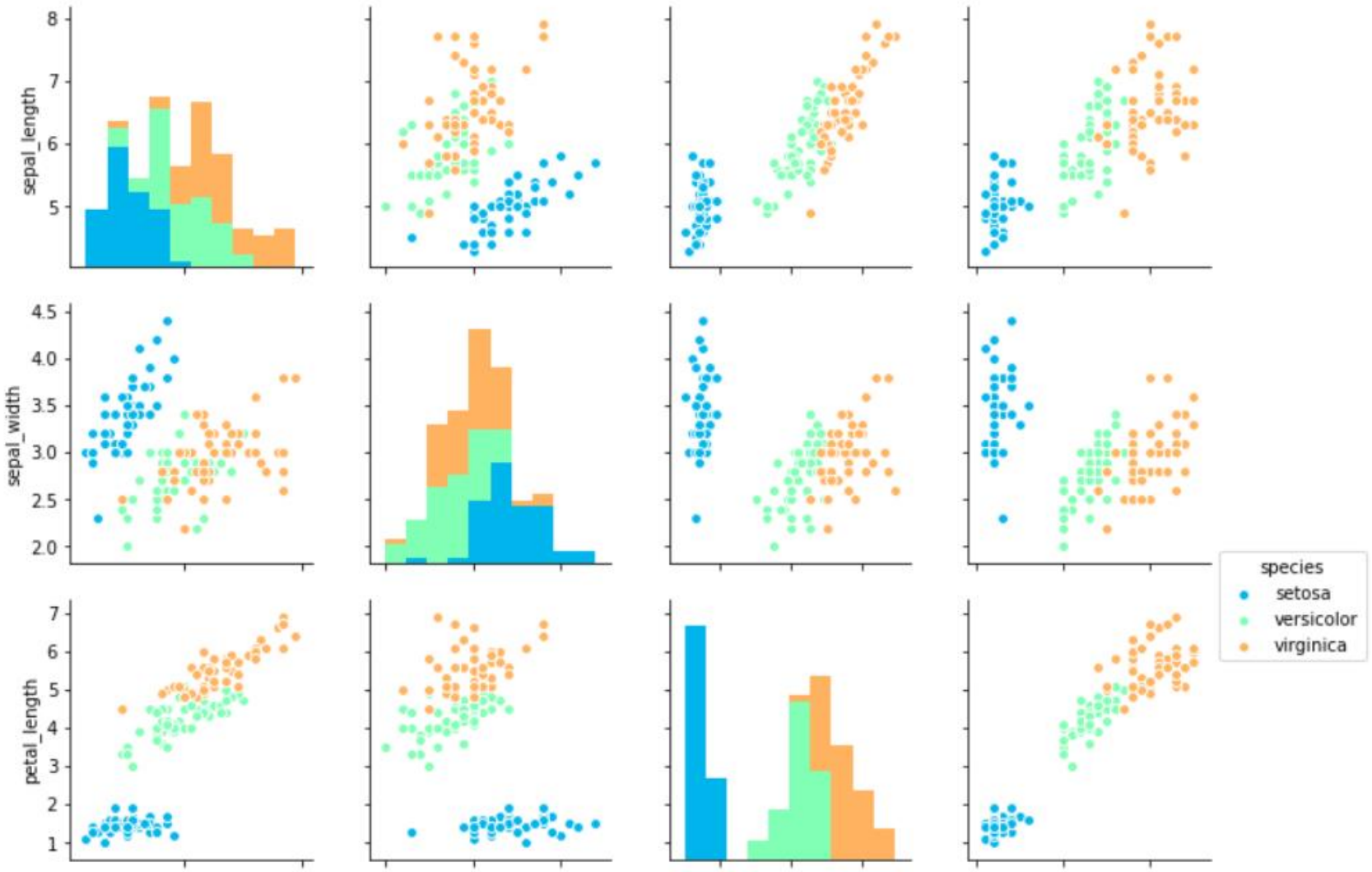
```
sns.pairplot(iris,hue='species',palette='rainbow')
```

```
<seaborn.axisgrid.PairGrid at 0x171e4de15f8>
```



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Facet Grid

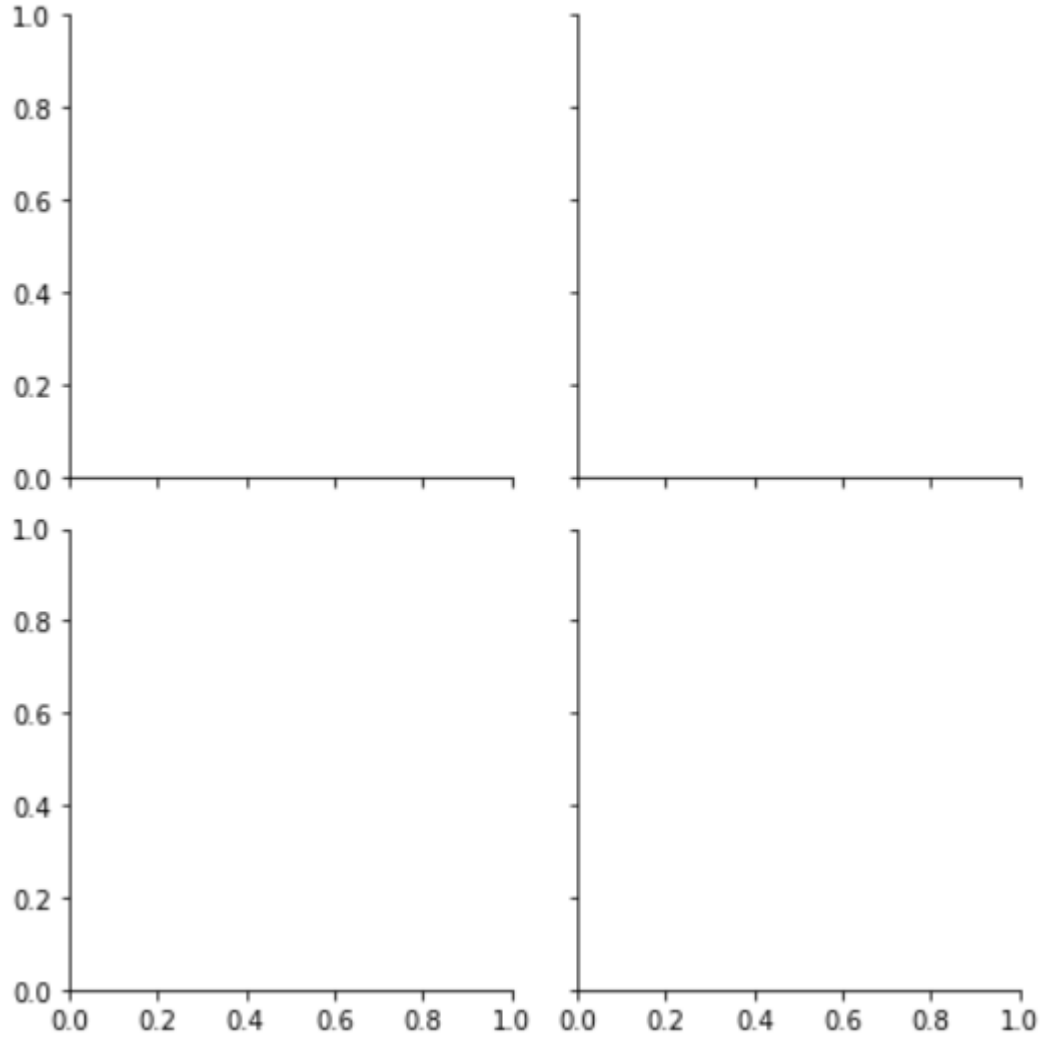
FacetGrid is the general way to create grids of plots based off of a feature:

```
tips = sns.load_dataset('tips')
```

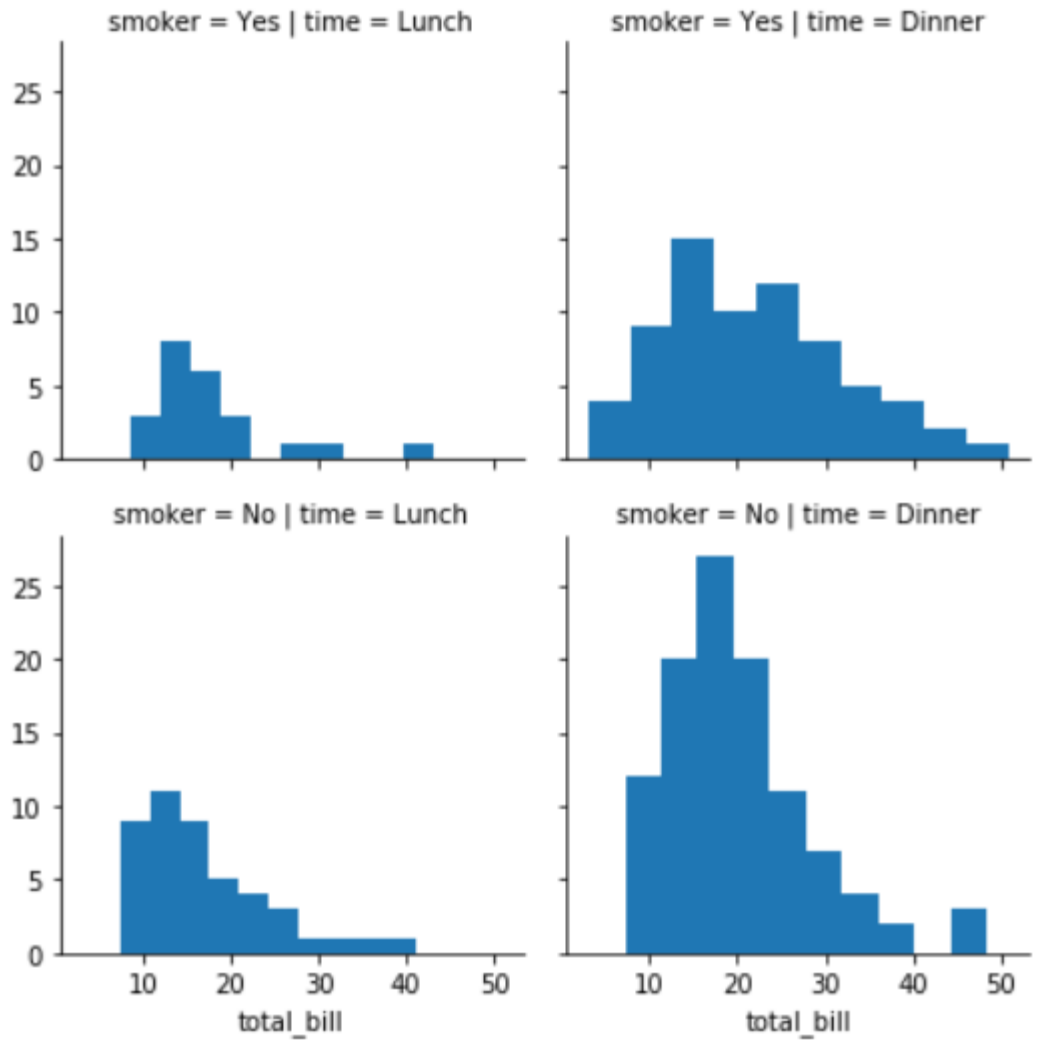
```
tips.head()
```

	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

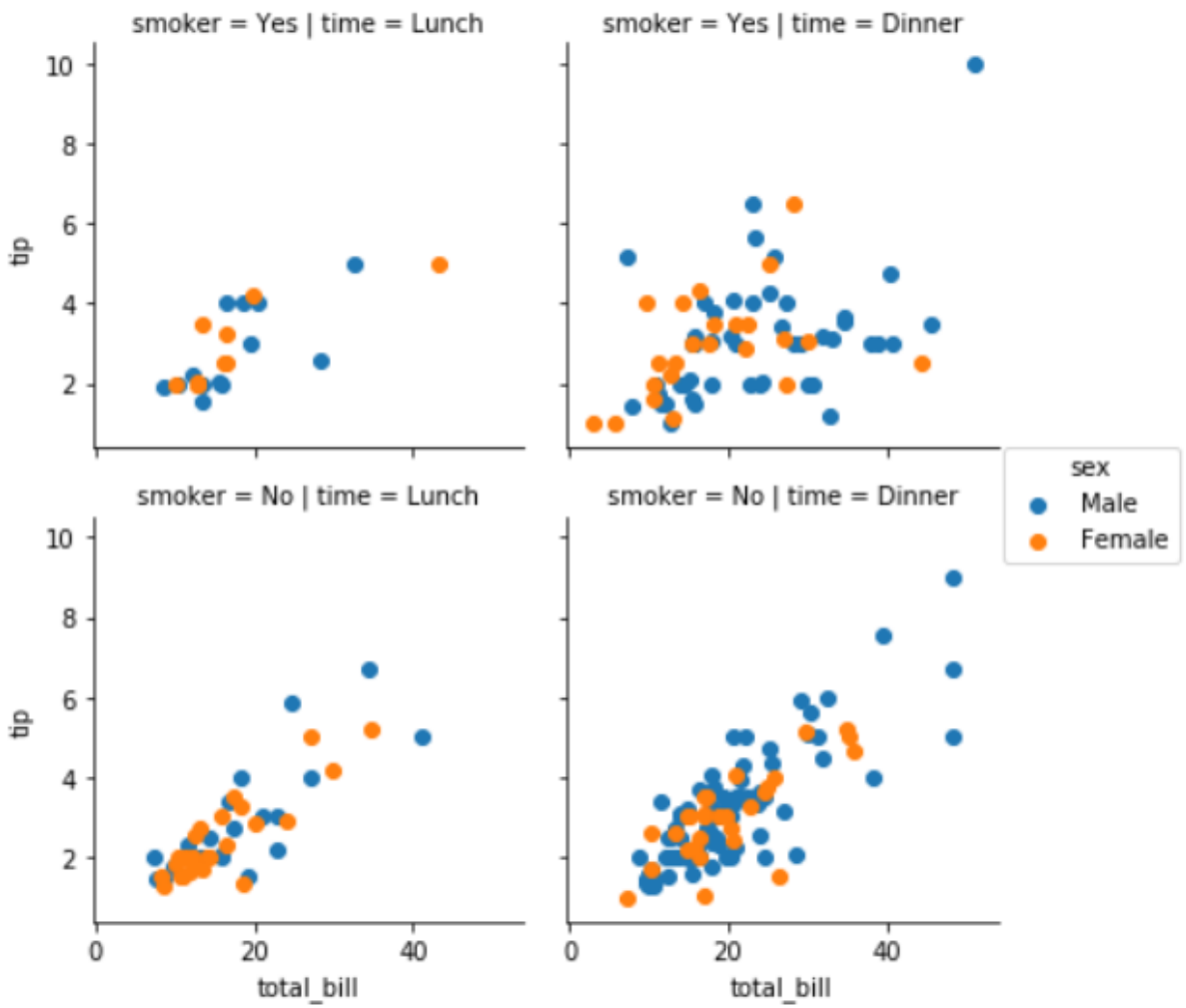
```python
# Just the Grid
g = sns.FacetGrid(tips, col="time", row="smoker")
```



```
g = sns.FacetGrid(tips, col="time",  row="smoker")
g = g.map(plt.hist, "total_bill")
```



```
g = sns.FacetGrid(tips, col="time",  row="smoker",hue='sex')
# Notice hwo the arguments come after plt.scatter call
g = g.map(plt.scatter, "total_bill", "tip").add_legend()
```



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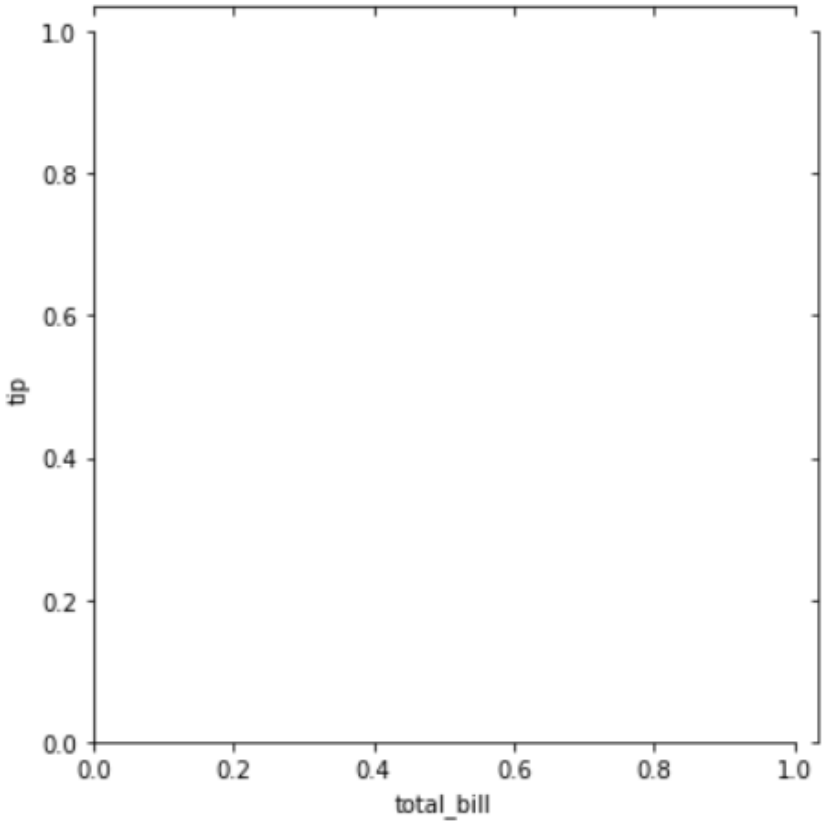
JointGrid

JointGrid is the general version for jointplot() type grids, for a quick example:

```
g = sns.JointGrid(x="total_bill", y="tip", data=tips)
```



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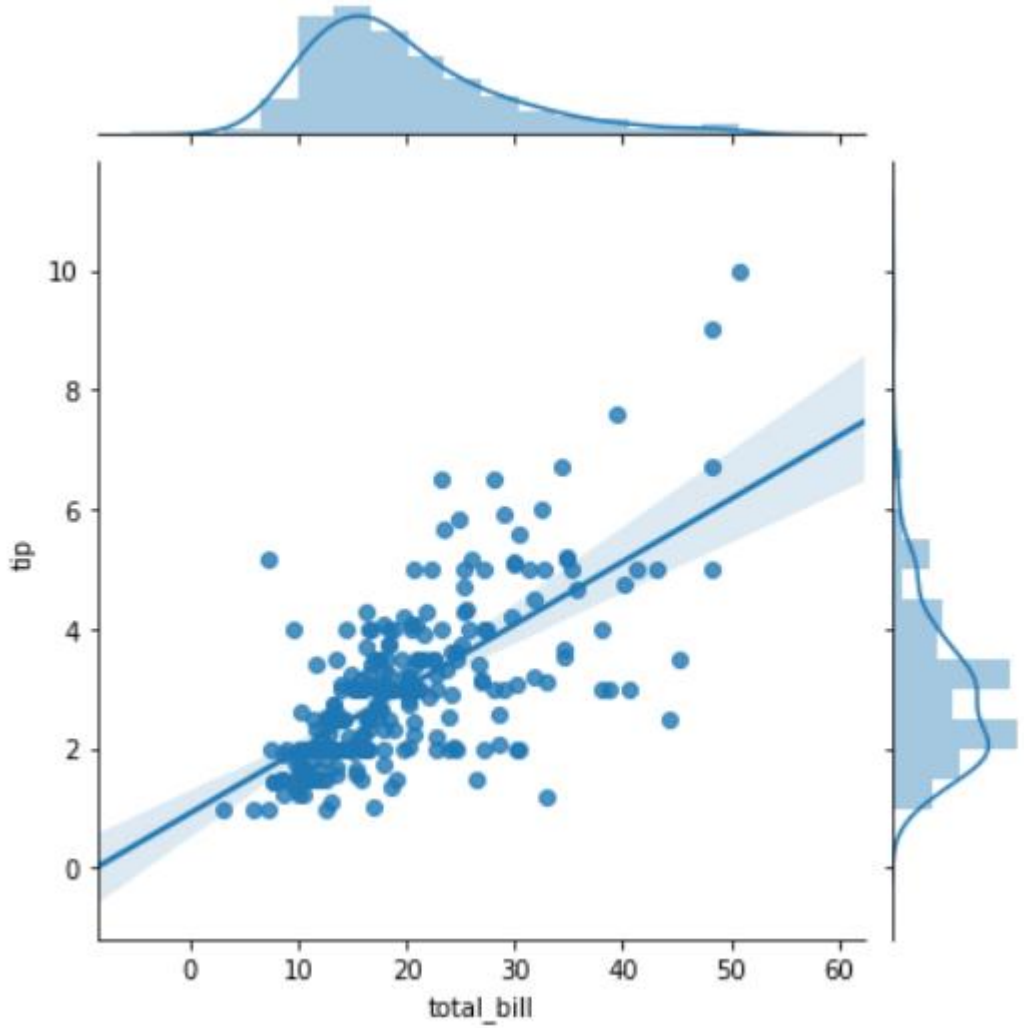
```
g = sns.JointGrid(x="total_bill", y="tip", data=tips)
g = g.plot(sns.regplot, sns.distplot)
```



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