

SEABORN FACETGRID

(I.E., SMALL MULTIPLES)

SHARP SIGHT

WHAT YOU'LL LEARN

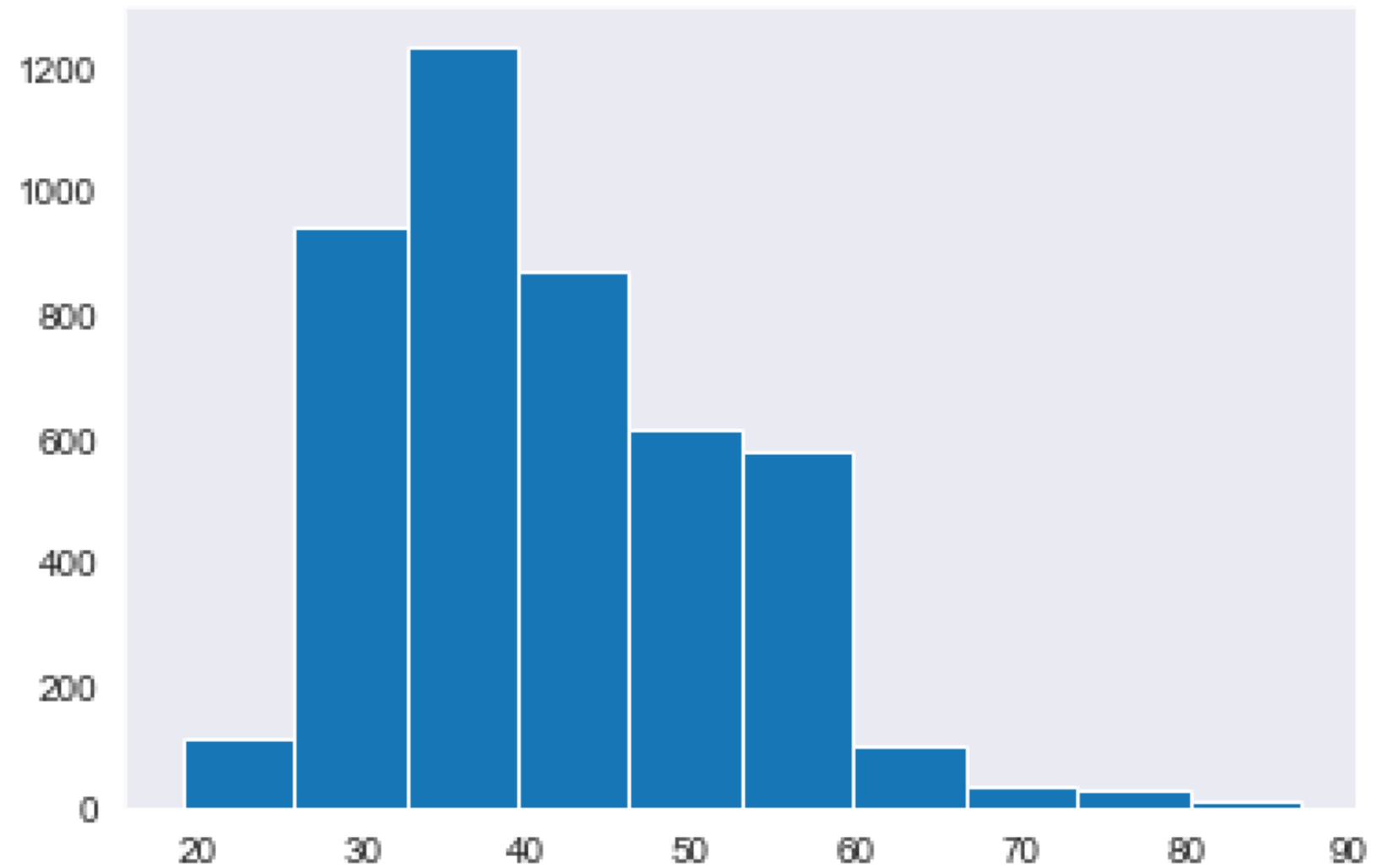
- How to create "small multiple" charts in Seaborn
 - AKA, trellis charts
- How to modify your small multiple charts
 - change the number of rows
 - change the number of columns

SEABORN FACETGRID OVERVIEW

EXAMPLE: YOU HAVE A PLOT

```
plt.hist(x = bank.age)
```

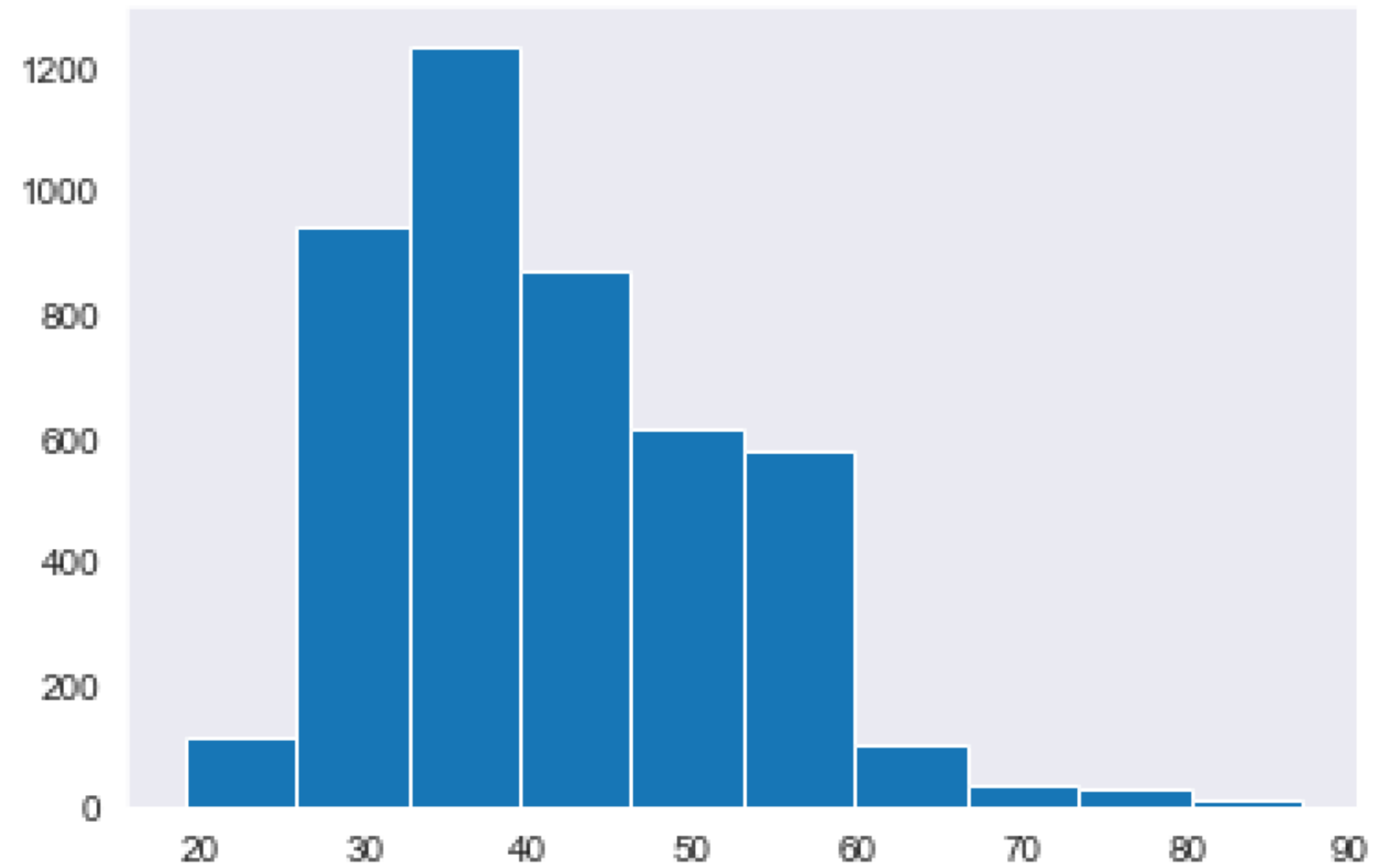
Histogram of age



YOU WANT TO ANALYZE FURTHER BY "BREAKING OUT" THE PLOT BY A CATEGORICAL VARIABLE

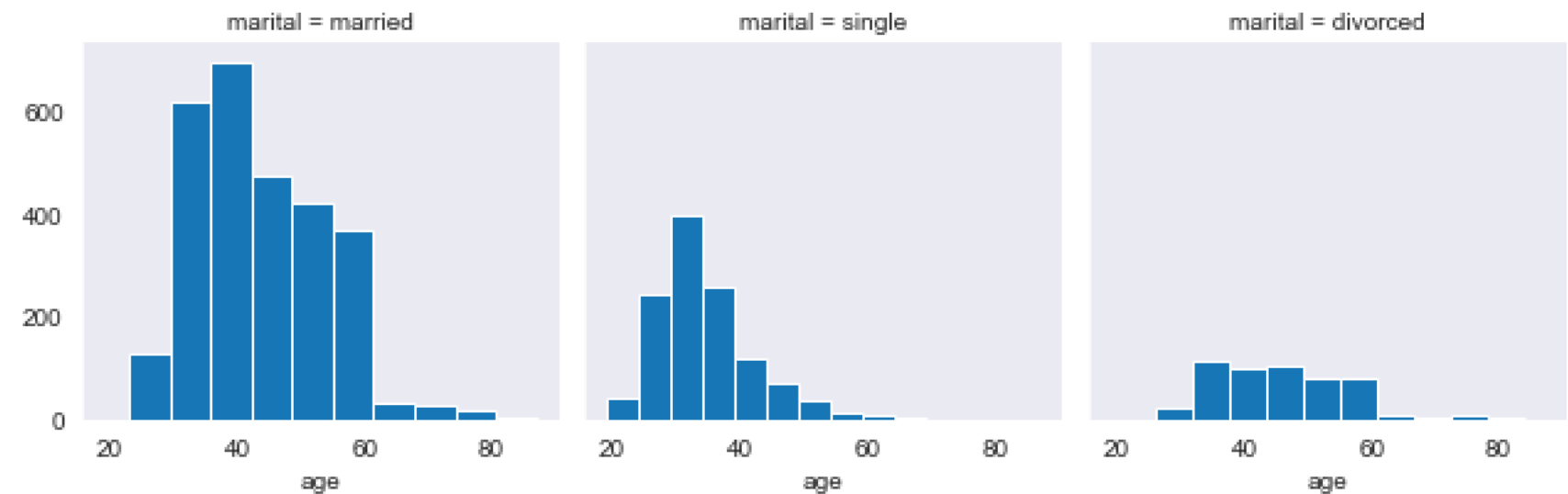
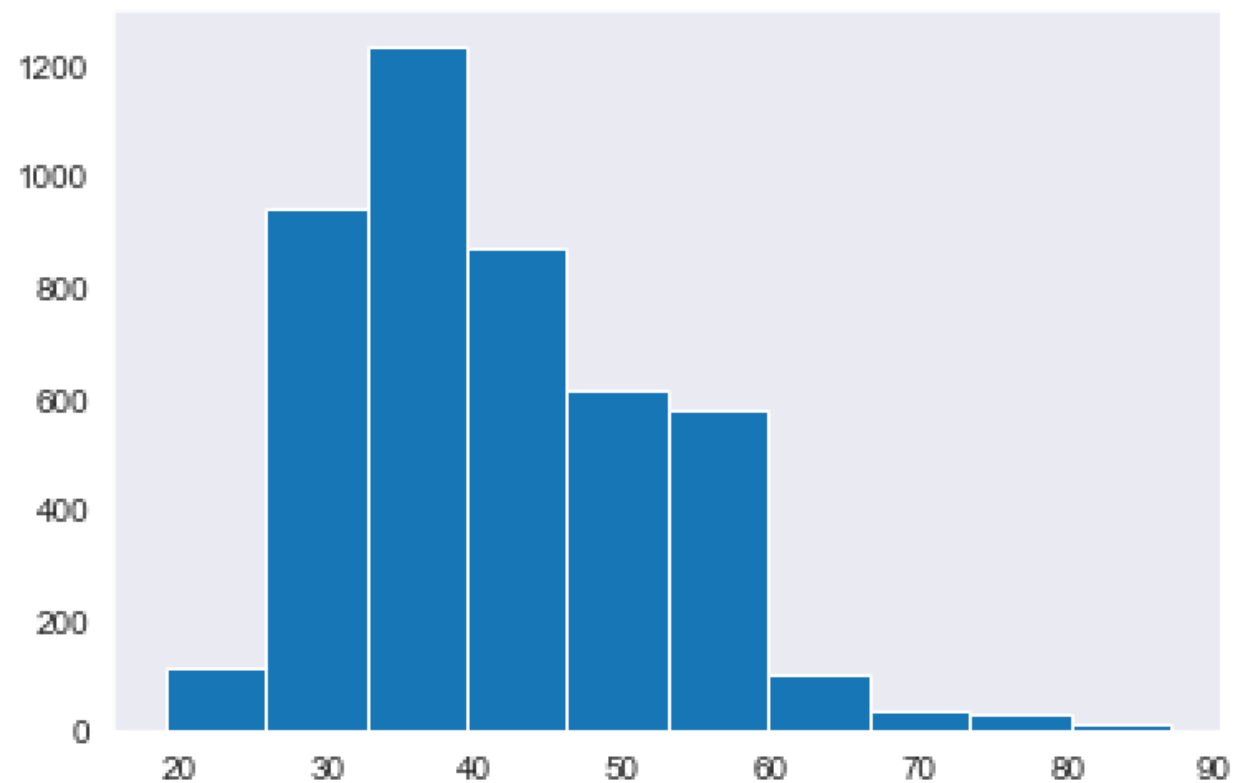
For example, maybe you want to view the distribution of age by marital status ...

Histogram of age



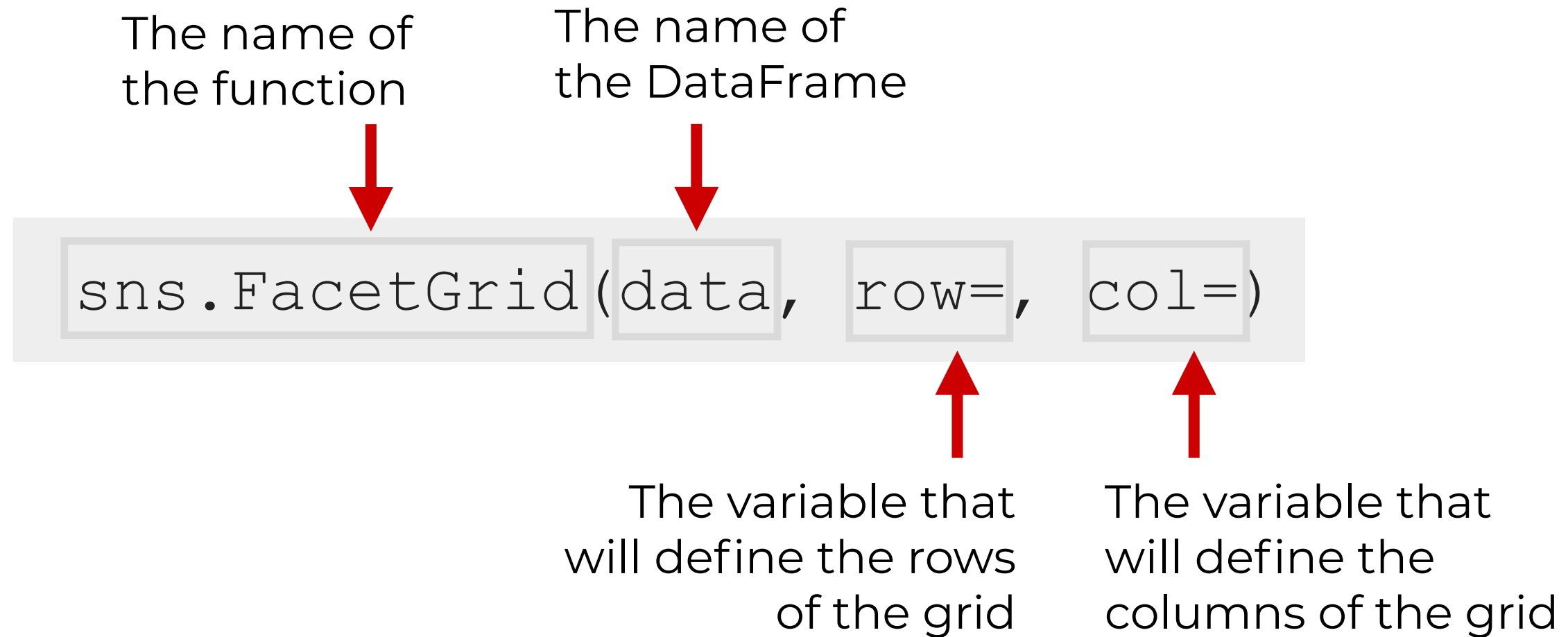
YOU CAN USE FACETGRID TO CREATE A "SMALL MULTIPLE" VERSION OF THE ORIGINAL CHART

```
grid_layout = sns.FacetGrid(bank, col = 'marital')  
grid_layout.map(plt.hist, 'age')
```



SEABORN FACETGRID SYNTAX

SYNTAX OF SNS.FACETGRID



Note: the variables that we map to the `row` and `col` parameters should be categorical variables

SYNTAX OF SNS.FACETGRID

```
sns.FacetGrid(data, row=, col=)
```

When you use `FacetGrid` like this, you're just setting up the grid layout ...

After you use `FacetGrid`, you'll need to use the `map()` method

SYNTAX OF SNS.FACETGRID

```
myGrid = sns.FacetGrid(data, row=, col=)
```

```
myGrid.map(plot-name, arguments ...)
```

The `map` method

The name of the plot you want to create (i.e., `plt.hist`, `sns.scatterplot`, etc)

The names of the variables that you want to plot in `plot-name`

SYNTAX OF SNS.FACETGRID

```
myGrid = sns.FacetGrid(data, row=, col=)
```

```
myGrid.map(plot-name, arguments ...)
```

Ultimately, creating a small multiple with Seaborn requires two steps:

1. initialize the grid with `FacetGrid`
2. Specify the plot to generate within the facets with the `map()` method

PARAMETERS OF SNS.FACETGRID

THE PARAMETERS OF SNS.FACETGRID

Parameter	What it does	Format	Required?	Default
row	Specify the variable that will define the rows of the grid	Variable name	Y, either row or col must be present	
col	Specify the variable that will define the columns of the grid	Variable name	Y, either row or col must be present	
col_wrap	Specify the number of panels along the columns of the grid (the panels will wrap to the next row after the number of columns equals col_wrap)	Integer	N	
hue	Specify variable that will modify the color of the observations, depending of the value	Variable name	N	
height	Specify the height of the panels	Number	N	3
aspect	Specify the aspect ratio of the panels, such that width = height * aspect	Number	N	1
col_order	Specify the order of the columns	A list-like sequence of variable names	N	

Note: `sns.FacetGrid()` has many more parameters, but these are the most commonly used

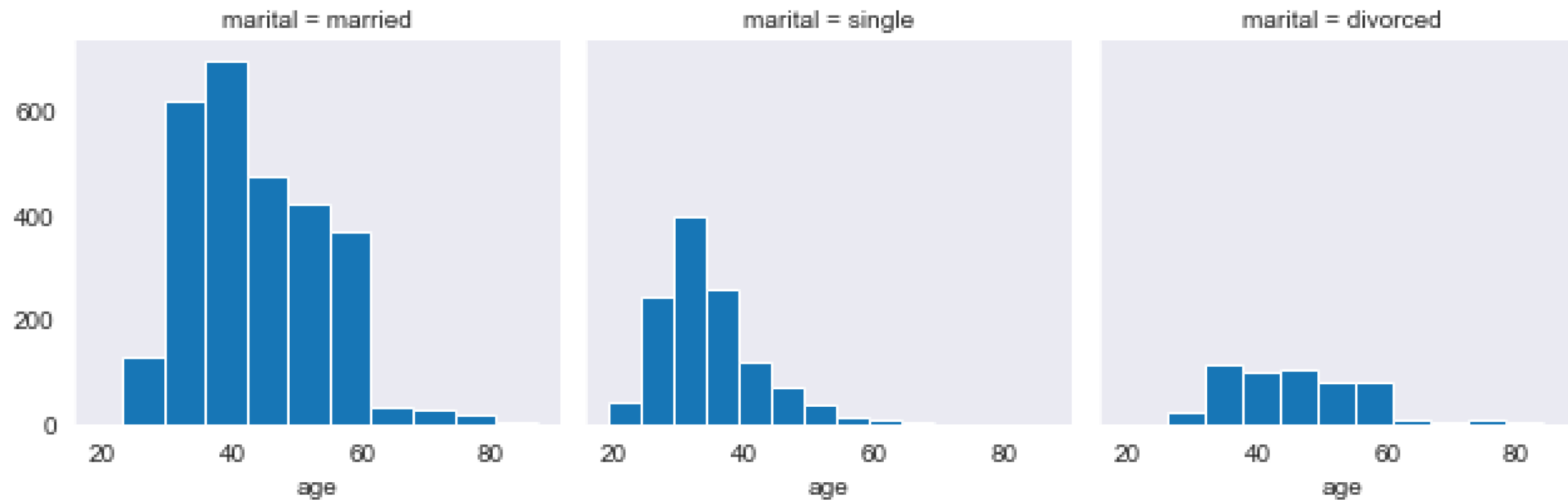
EXAMPLES OF SNS.SCATTERPLOT

EXAMPLE 1: CREATE A GRID WITH A SINGLE ROW

```
grid_layout = sns.FacetGrid(bank, col = 'marital')  
grid_layout.map(plt.hist, 'age')
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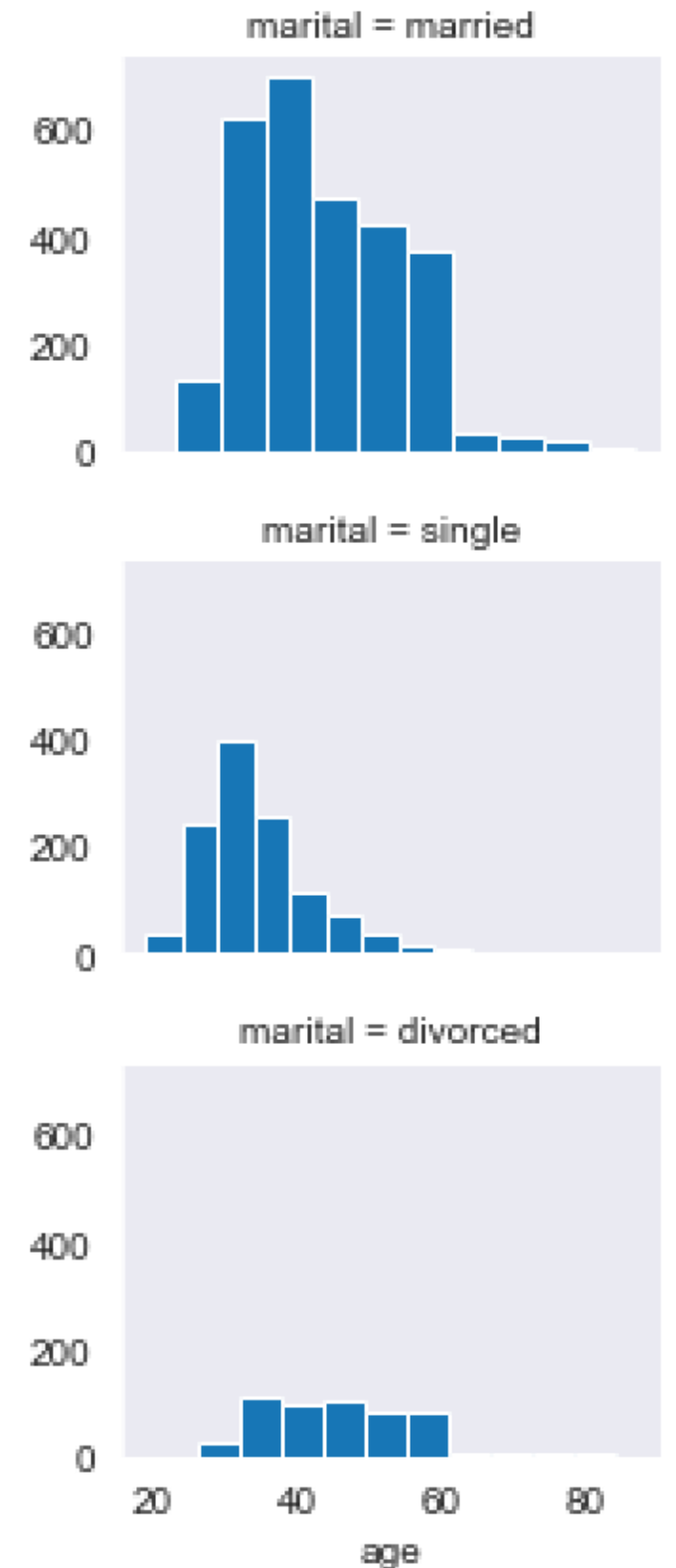


EXAMPLE 2: CREATE A GRID WITH A SINGLE COLUMN

```
grid_layout = sns.FacetGrid(bank, row = 'marital')  
grid_layout.map(plt.hist, 'age')
```

EXAMPLE 2: CREATE A GRID WITH A SINGLE COLUMN

```
grid_layout = sns.FacetGrid(bank, row = 'marital')  
grid_layout.map(plt.hist, 'age')
```



EXAMPLE 3: WRAP THE COLUMNS

```
grid_layout = sns.FacetGrid(bank, col = 'job', col_wrap = 4)
grid_layout.map(plt.hist, 'age')
```

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```
grid_layout = sns.FacetGrid(bank, col = 'job', col_wrap = 4)
grid_layout.map(plt.hist, 'age')
```

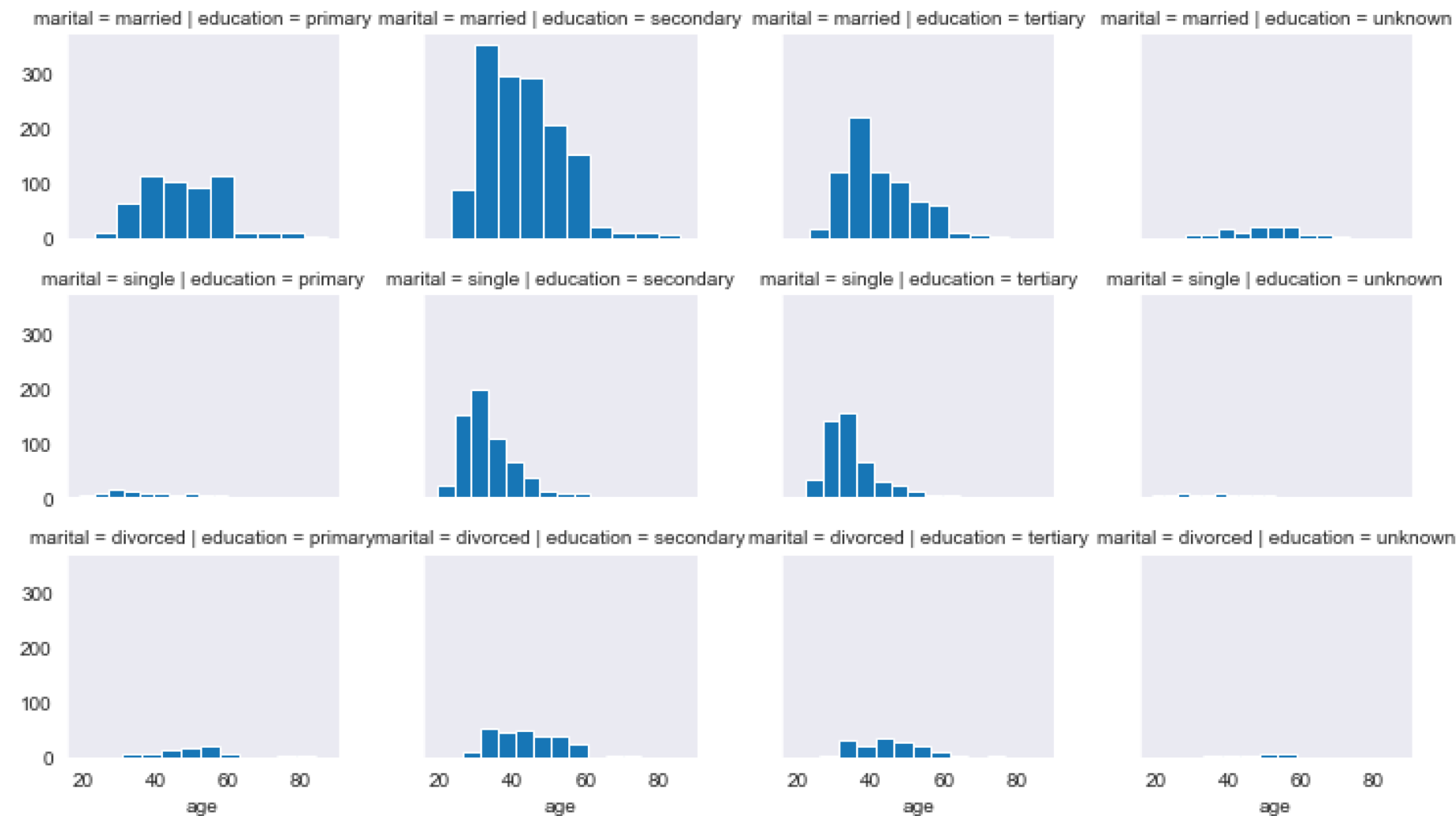


EXAMPLE 4: SPECIFY ROW AND COLUMN GRID

```
grid_layout = sns.FacetGrid(bank, row = 'marital', col = 'education')  
grid_layout.map(plt.hist, 'age')
```

EXAMPLE 4: SPECIFY ROW AND COLUMN GRID

```
grid_layout = sns.FacetGrid(bank, row = 'marital', col = 'education')  
grid_layout.map(plt.hist, 'age')
```



RECAP

RECAP OF WHAT WE LEARNED

- How to create "small multiple" charts in Seaborn
 - AKA, trellis charts
- How to modify your small multiple charts
 - change the number of rows
 - change the number of columns
- Note: FacetGrid is a little difficult to understand for beginners
 - the best way to learn it is to work with examples
- **Next Steps:** Watch the code walkthrough video for examples of FacetGrid