Seaborn heatmap

WHAT YOU'LL LEARN

- How to use the `sns.heatmap()` function

- How to create heatmaps in Seaborn

Seaborn heatmap overview

Example: we have a dataframe with a special shape

Different categories
are the "columns"

	divorced	married	single
primary	1072.7	1371.6	2065.8
secondary	891.2	1272.9	1154.0
tertiary	1437.9	1860.7	1754.7
unknown	1849.3	1725.5	1562.2

Different categories are the row labels
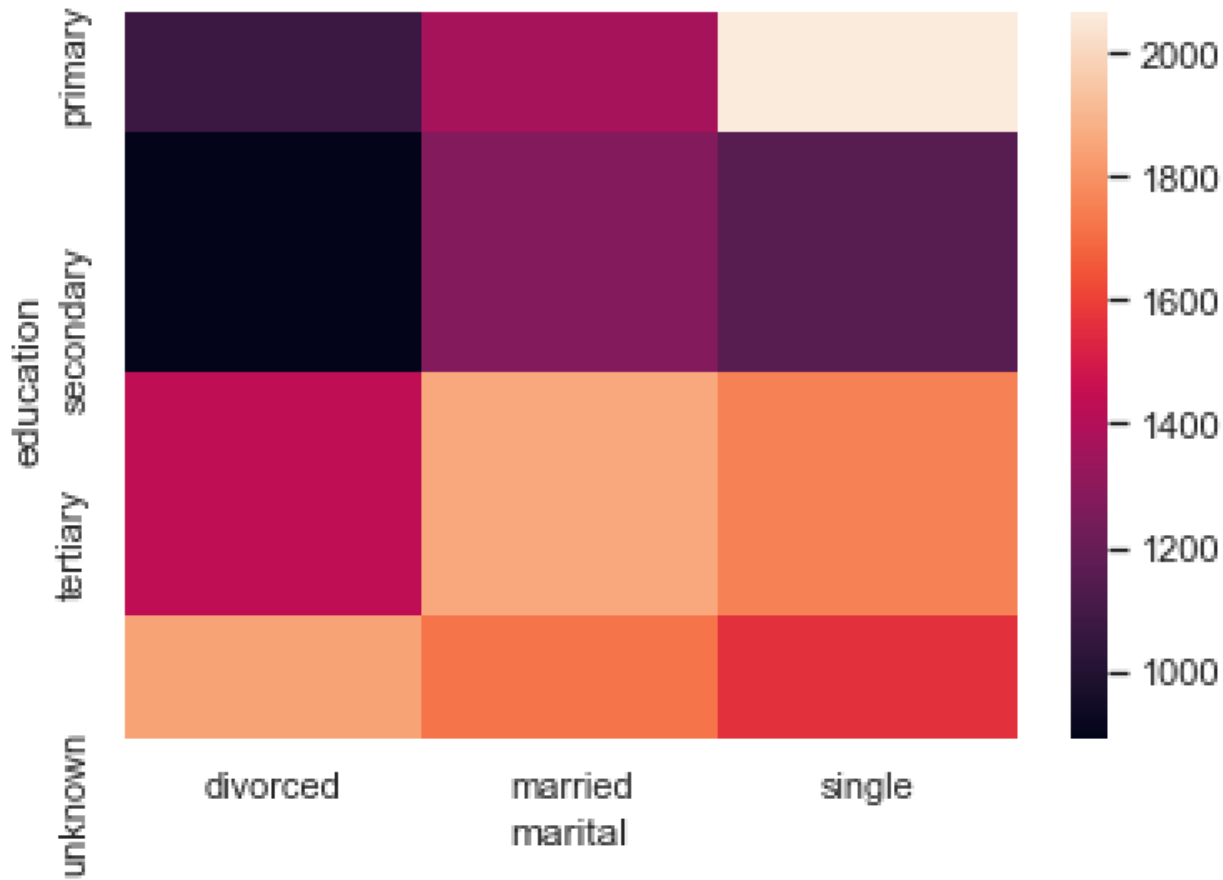
The cells contain numeric values

Note: we often need to use `pd.pivot()` to get data into this shape

THE HEATMAP FUNCTION CAN VISUALIZE THIS DATA

```
sns.heatmap(data = bank_meanbal_ed_by_marital)
```
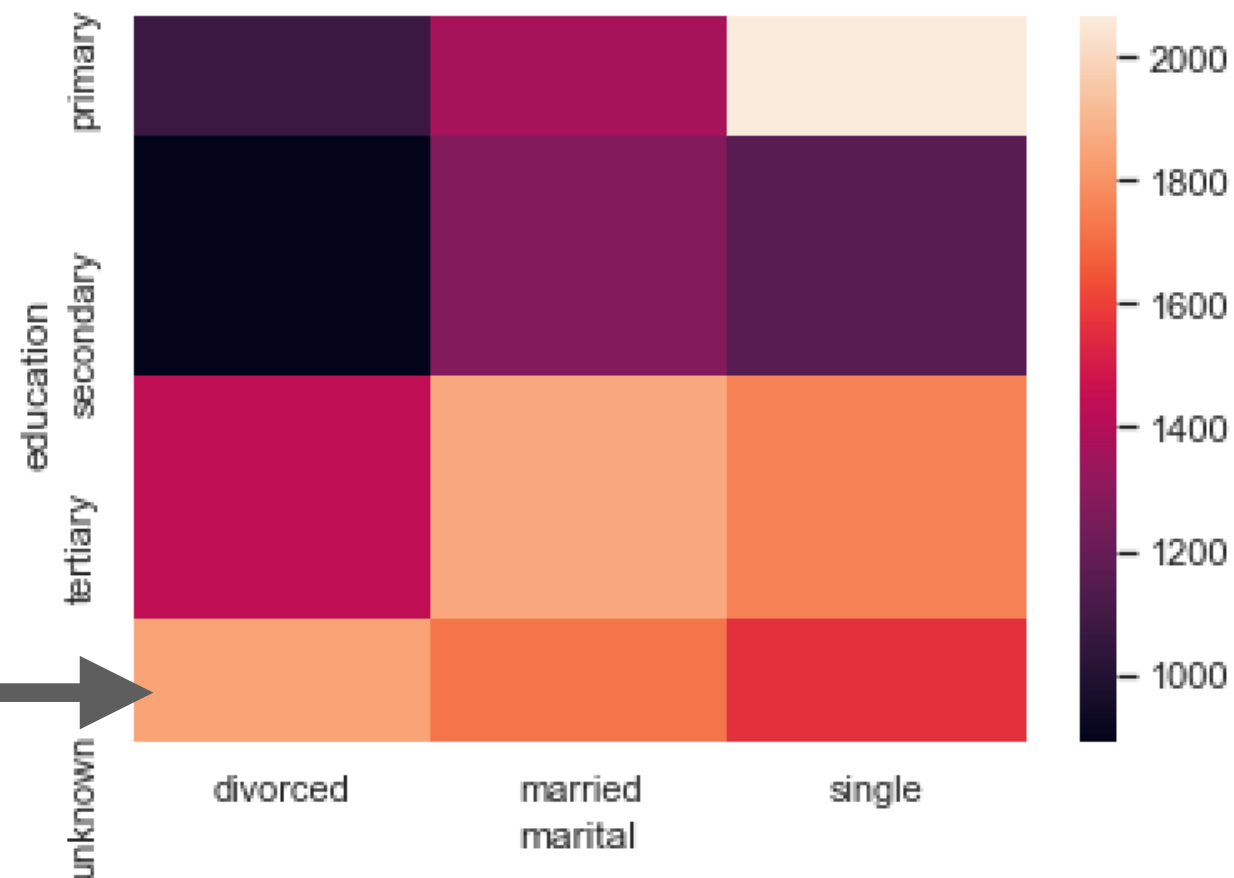
bank_meanbal_ed_by_marital

	divorced	married	single
primary	1072.7	1371.6	2065.8
secondary	891.2	1272.9	1154.0
tertiary	1437.9	1860.7	1754.7
unknown	1849.3	1725.5	1562.2

SNS.HEATMAP VISUALIZES THE NUMERIC CELL VALUES AS COLORS ALONG A SCALE

```
sns.heatmap(data = bank_meanbal_ed_by_marital)
```


Instead of showing numbers, `sns.heatmap()` shows colors

Seaborn heatmap syntax

Syntax of sns.heatmap

The name of
the function

```
sns.heatmap(data=)
```

A 2-dimensional dataset that can be
coerced into a Numpy array

Note: This is often a Pandas
dataframe that has been reshaped
with the `pd.pivot()` function

Parameters of sns.heatmap

THE PARAMETERS OF SNS.HEATMAP

Parameter	What it does	Format	Required?	Default
`vmin, vmax`	These values specify the minimum and maximum values for the color mapping	Number	N	Inferred from data
`center`	Value of the center of the color mapping	Number	N	Inferred from data
`annot`	Specify whether the data value should be "annotated" within the cell	Boolean (`True` or `False`)	N	
`cmap`	Specify the color palette that will be mapped to the data values	matplotlib colormap name or list of colors	N	Depends on value of `center`

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

Recap

RECAP OF WHAT WE LEARNED

- How to use the `sns.heatmap()` function

- Note: using `sns.heatmap()` often requires significant data manipulation
  - learn Pandas well!

- **Next Steps**: Watch the code walkthrough video to see an example of `sns.heatmap()`