The seaborn Package

> Seaborn is a library for making statistical graphics in Python. It is built on top of matplotlib and closely integrated with pandas data structures. — Seaborn website

Reference

- https://seaborn.pydata.org/
- https://github.com/mwaskom/seaborn
- https://seaborn.pydata.org/tutorial.html
- https://seaborn.pydata.org/examples/index.html
- https://www.datacamp.com/community/tutorials/seaborn-python-tutorial
- Styles: https://seaborn.pydata.org/generated/seaborn.set.html

What's the difference between seaborn and matplotlib?

Seaborn is designed to be more user-friendly and to work better with pandas dataframes. For more information on dataframes and the pandas package see here. It is also easier to customize plot colors, formats, etc. with Seaborn. Because seaborn is built on top of matplotlib, you will have to use commands from both packages for many operations.

Before diving into seaborn, make sure you brush up on your matplotlib skills! Click here for more information on matplotlib.

Installation

First install the package using Pip, if necessary:

```
pip install seaborn
```

Usage

Constructing a Scatterplot:

```
# adapted from https://seaborn.pydata.org/tutorial/relational.html

import matplotlib.pyplot as plt
import seaborn as sns

# The .set() function changes the plot's aesthetics
# For more information and specific styles see:
https://seaborn.pydata.org/generated/seaborn.set.html
```

```
sns.set(style="darkgrid")

# The .load_dataset() function uses a built-in dataset
tips = sns.load_dataset("tips")
print(type(tips)) #> <class 'pandas.core.frame.DataFrame'>
print(tips.columns.tolist()) #> ['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size']

# The .relplot() function creates a relational plot using an x-axis and y-axis
# It also allows you to specify the markers, colors, sizes, etc.
sns.relplot(x="total_bill", y="tip", hue="smoker", data=tips)

# Need to explicitly "show" the chart window
plt.show()
```

the resulting scatterplot - two axes, two data sets

> NOTE: once you "show" the chart, you'll see the chart open in native window on your computer. You'll be able to view your chart, but when you're done you'll need to close the chart window in order to regain the ability to type commands in your terminal window.

Consult the documentation and examples for a variety of chart customization options.