Cheatography

Seaborn Cheat Sheet

by Justin1209 (Justin1209) via cheatography.com/101982/cs/21234/

Import the Seaborn Library

```
from matplotlib import pyplot as plt
import seaborn as sns
import numpy as np
```

Seaborn is a extension to **Matplotlib** with more visually appealing syntax and additional Chart Types. That's why **Matplotlib** should also be imported.

If we want to calculate **aggregates** we need to **import numpy** aswell.

Bar Plot

```
sns.barplot(
 data=df ,
 x="x value column" ,
 y="y value column",
# everything specified below is optional
 ci="sd"
estimator=np.median | len
hue="column to compare"
 )
plt.show()
# ci="sd" changes the error bar to standard deviation
# estimator is used to specifiy the aggregation and takes any argument that works on a list. (examples provided in code)
# hue adds a nested categorical variable to compare to the "y value column"
```

If the specified columns need to be **aggregated** first, **Seaborn** will perform that aggregation automatically. *(mean by default)*

Seaborn will, by default, provide an **error bar** displaying the **bootstrapped confidence interval**(95%).

Aggregates (with numpy)

Median **np.median**(df.column_name)

KDE (Key Densitiy Estimator) Plots

Boxplots

```
sns.boxplot(
 data=df,
 x='label',
 y='value',

# optional
 width=0.45
)
plt.show()
# In Seaborn it's also possible to plot multiple Boxplots in one viz
```

The box represents the **interquartile range**
The line in the middle of the box is the **median**
The end lines are the **first** and **third quartiles**
The diamonds show **outliers**

Violin Plots

```
sns.violinplot(
 data=df,
 x="label",
 y="value"
)
```

Two KDE plots that are symmetrical along the center line. (Just for visual effect)

A **white dot** represents the median.

The **thick black line** in the center of each violin represents the interquartile range.

The **lines that extend from the center** are the confidence intervals (95%)

Seaborn Styling (Figure Style and Scale)

Seaborn Styling (Figure Style and Scale) (cont)

```
 'font.size': 19.2,
 'grid.linewidth': 1.6,
 'legend.fontsize': 16.0,
 'lines.linewidth': 2.8,
 'lines.markeredgewidth': 0.0,
 'lines.markersize': 11.2,
 'patch.linewidth': 0.48,
 'xtick.labelsize': 16.0,
 'xtick.major.pad': 11.2,
 'xtick.major.width': 1.6,
 'xtick.minor.width': 0.8,
 'ytick.labelsize': 16.0,
 'ytick.major.pad': 11.2,
 'ytick.major.width': 1.6,
 'ytick.minor.width': 0.8
}
```

Seaborn Styling (Color)

```
# If you want to quickly see what a palette looks like
 # Save a palette to a variable:
   palette = sns.color_palette-("bright")
 # Use palplot and pass in the variable:
   sns.palplot(palette)
# Select a palette in Seaborn:
  sns.set_palette("Paired")
# Default Palettes
-> deep, muted, pastel, bright, dark, colorblind
# More Palettes using Color Brewer:
http://colorbrewer2.org
```

sns.kdeplot(*dataset1*, *shade*=True)

sns.kdeplot(*dataset2*, *shade*=True)

...

KDE Plots show the **distribution** of an **univariate** dataset.
univariate datasets have only **one** variable. (e.g.: Temperature)

shade defines if the are under the line is shaded

```
# Themes: (called prior to plot)
sns.set_style("")
->darkgrid, whitegrid, dark,
white, ticks
#Removes Plot Borders (called
after plot)
sns.despine() (default:
top=True, right=True)
-> bottom, left
#Adjust font- and label size
sns.set_context(context="paper",
font_scale=1.4, rc={"grid.li-
newidth": 0.6} )
-> paper, notebook (default),
talk, poster
   In order of relative size
-> Arguments for rc parameter:
{
 'axes.labelsize': 17.6,
 'axes.titlesize': 19.0,
```

By **Justin1209** (Justin1209)
cheatography.com/justin1209/

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