SEABORN CHEATSHEET:
PYTHON DATA VIZ TUTORIAL

This Seaborn cheatsheet covers common and useful functions for creating charts and statistical plots in Python. To see the full gallery of what's possible, visit the online version at elitedatascience.com.

SETUP

First, make sure you have the following installed on your computer:

- Python 2.7+ or Python 3
- Pandas
- Matplotlib
- Seaborn
- Jupyter Notebook (optional, but recommended)

*note: We strongly recommend installing the Anaconda Distribution, which comes with all of those packages.

IMPORT LIBRARIES AND DATASET

```
import pandas as pd
from matplotlib import pyplot as plt
%matplotlib inline
import seaborn as sns
df = pd.read_csv('Pokemon.csv', index_col=0)
```

*Up-to-date link to the sample dataset can be found here.

SCATTERPLOT

```
sns.lmplot(x='Attack', y='Defense', data=df)
```

ADJUSTING AXES LIMITS

```
sns.lmplot(x='Attack', y='Defense', data=df)
plt.ylim(0, None)
plt.xlim(0, None)
```

PREPROCESS W/ PANDAS + BOXPLOT

```
stats_df = df.drop(['Total', 'Stage', 'Legendary'], axis=1)
sns.boxplot(data=stats_df)
```

SET THEME + VIOLINPLOT

```
sns.set_style('whitegrid')
sns.violinplot(x='Type 1', y='Attack', data=df)
```

SET CUSTOM COLOR PALETTE

```
pkmn_type_colors = ['#78C850', '#F08030', '#6890F0', '#A8B820',
                    '#A8A878', '#A040A0', '#F8D030', '#E0C068'
                    '#EE99AC', '#C03028', '#F85888', '#B8A038',
                    '#705898', '#98D8D8', '#7038F8']
sns.violinplot(x='Type 1', y='Attack', data=df,
               palette=pkmn_type_colors)
```

OVERLAYING PLOTS

```
plt.figure(figsize=(10,6))
sns.violinplot(x='Type 1', y='Attack', data=df,
               inner=None, palette=pkmn_type_colors)
sns.swarmplot(x='Type 1',
              y='Attack',
              data=df,
              color='k',
              alpha=0.7)
plt.title('Attack by Type')
```

PUTTING IT ALL TOGETHER

```
stats_df.head()
melted_df = pd.melt(stats_df,
            id_vars=["Name", "Type 1", "Type 2"],
            var_name="Stat")
sns.swarmplot(x='Stat', y='value', data=melted_df, hue='Type 1')
plt.figure(figsize=(10,6))
sns.swarmplot(x='Stat', y='value', data=melted_df,
              hue='Type 1', split=True, palette=pkmn_type_colors)
plt.ylim(0, 260)
plt.legend(bbox_to_anchor=(1, 1), loc=2)
```

OTHER PLOT TYPES

```
corr = stats_df.corr()
sns.heatmap(corr)

sns.distplot(df.Attack)
sns.countplot(x='Type 1', data=df, palette=pkmn_type_colors)
plt.xticks(rotation=-45)


g = sns.factorplot(x='Type 1', y='Attack', data=df,
                   hue='Stage', col='Stage', kind='swarm')
g.set_xticklabels(rotation=-45)


sns.kdeplot(df.Attack, df.Defense)
sns.jointplot(x='Attack', y='Defense', data=df
```