

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](https://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)
```