

Import

```
import matplotlib.pyplot as plt
import seaborn as sns
```

Plotting Process

0. Get data
1. Control Figure Aesthetics
2. Plot
3. Customise

Figure Aesthetics

```
f, ax = plt.subplots(figsize=(5, 6))
sns.set() # reset defaults
sns.set_style("whitegrid") # white background (not
grey)
sns.set_palette("pastel") # change colours
```

Axis Grids

```
# histogram of age by survived (0,1) and sex (m,f) = 4
plots
g = sns.FacetGrid(titanic, col="survived", row="sex")
g = g.map(plt.hist, "age")
plt.show(g)
# plot survived by pclass - two lines by sex (hue)
sns.factorplot(x="pclass", y="survived", hue="sex",
data=titanic)
# regplot - use hue to split by species
sns.lmplot(x="sepal_width", y="sepal_length",
hue="species", data=iris)
# pair-wise distributions and histograms
sns.pairplot(iris)
# alternate - create pair grid and then map scatter
plots
h=sns.PairGrid(iris)
h=h.map(plt.scatter)
# customise
g.set(xlim=(0,5), ylim=(0,5), xticks=[0, 2.5, 5],
yticks=[0, 2.5, 5])
g.set_ylabels("yaxis") / g.set_axis_labels("Y", "X")
```

Plots

```
# scatter plot
sns.stripplot(x="species", y="petal_length",
data=iris)
sns.swarmplot(x="species", y="petal_length",
data=iris) # no overlap
# bar chart
sns.barplot(x="sex", y="survived", hue="class",
data=titanic)
# count plot (similar to histogram for categorical)
sns.countplot(x="deck", data=titanic,
palette="Greens_d")
# point plot (like line chart?)
sns.pointplot(x="class", y="survived", hue="sex",
data=titanic,
palette={"male":"g",
"female":"m"},
markers=["^", "o"],
linestyles=["-", "--"])
# box plot
sns.boxplot(x="alive", y="age", hue="adult_male",
data=titanic)
# histogram
sns.distplot(data.colname, kde=False, color="b")
# heat map
sns.heatmap(uniform_data, vmin=0, vmax=1)
# customise
pltobj.set(xlabel="x", title="title", ylabel="y",
xlim=(0,100), ylim=(0,100))
pltobj.title("A title") # similar to above if only
want one item
```

Other

```
plt.show()
plt.savefig('foo.png')
plt.close() # close window
plt.cla() / plt.clf() # close axis / figure
```



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