

C: Introduction to Seaborn

Advanced module for statistical plots

- Built on matplotlib
- Provides many high-level routines for constructing sophisticated figures
- Traditionally imported as sns:

```
import seaborn as sns
```

Seaborn calls return **one of three things**:

1. Matplotlib **Axes** object (two-dimensional drawing areas)
Can manipulate using Matplotlib Axes calls, such as `ax.set_xlabel()`
2. Matplotlib **Figure** object (figure containing one or more Axes)
Can manipulate using Matplotlib Figure calls, such as `fig.tight_layout()`
3. Seaborn **Grid** object
Higher level than a Figure object
Can manipulate using Seaborn calls or grid attributes

Example:

Call to plot a joint distribution returns a grid object:

```
jg = sns.jointplot()
```

Grid-level call to set axis labels:

```
jg.set_axis_labels('X label', 'Y label')
```

Can access the embedded figure via the **.figure attribute**:

```
jg.figure.suptitle('Title goes here')
```

Seaborn tip:

- Most calls work best with long-form data:

Long form (better):

Wide form:

Year	State	Value
2001	NY	123
2001	FL	234
2002	NY	345
2002	FL	456

Year	NY	FL
2001	123	234
2002	345	456

- Convert wide to long with `.stack()` or `.melt()`

See `demo.py` for examples