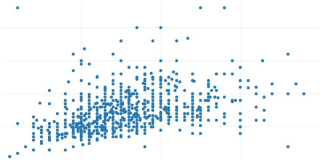
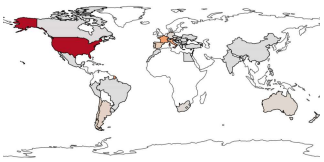


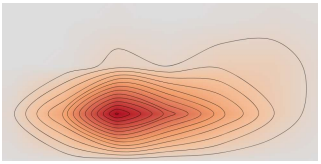
Scatter Plot

go.Scatter()



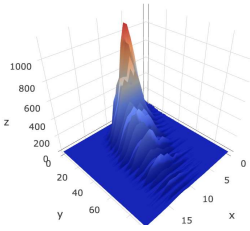
Choropleth

go.Choropleth()



Heatmap

go.Heatmap()



Surface Plot

go.Surface()

Introduction to plotly

So far in this tutorial we have been using `seaborn` and `pandas`, two mature libraries designed around `matplotlib`. These libraries all focus on building "static" visualizations: visualizations that have no moving parts. In other words, all of the plots we've built thus far could appear in a dead-tree journal article.

The web unlocks a lot of possibilities when it comes to interactivity and animations. There are a number of plotting libraries available which try to provide these features.

In this section we will examine `plotly`, an open-source plotting library that's one of the most popular of these libraries.

In [11]:

```
import pandas as pd
reviews = pd.read_csv("data/winemag-data-130k-v2.csv.zip", index_col=0)
reviews.head(3)
```

Out[11]:

	country	description	designation	points	price	province	region_1	region_2	taster_na
0	Italy	Aromas include tropical fruit, broom, brimston...	Vulkà Bianco	87	NaN	Sicily & Sardinia	Etna	NaN	K O'Ke
1	Portugal	This is ripe and fruity, a wine that is smooth...	Avidagos	87	15.0	Douro	NaN	NaN	Roger V
2	US	Tart and snappy, the flavors of lime flesh and...	NaN	87	14.0	Oregon	Willamette Valley	Willamette Valley	Paul Gre

`plotly` provides both online and offline modes. The latter injects the `plotly` source code directly into the notebook; the former does not. I recommend using `plotly` in offline mode the vast majority of the time.

The following line will help you do so!

In [3]:

```
from plotly.offline import init_notebook_mode, iplot
init_notebook_mode(connected=True)
```

Now, start using `Plotly` with `winemag-data-130k-v2.csv.zip` to create the following plots (Your notebook must contain one of each):

- Scatter Plot
- Choropleth Plot
- Heatmap
- Surface Plot