

DSC 640

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Weeks 9 + 10 Charts

02/28/24

```
In [6]: import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
import folium
from folium.plugins import HeatMap
```

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In [7]: # data
data = pd.read_csv("costcos-geocoded.csv")
data.head()
```

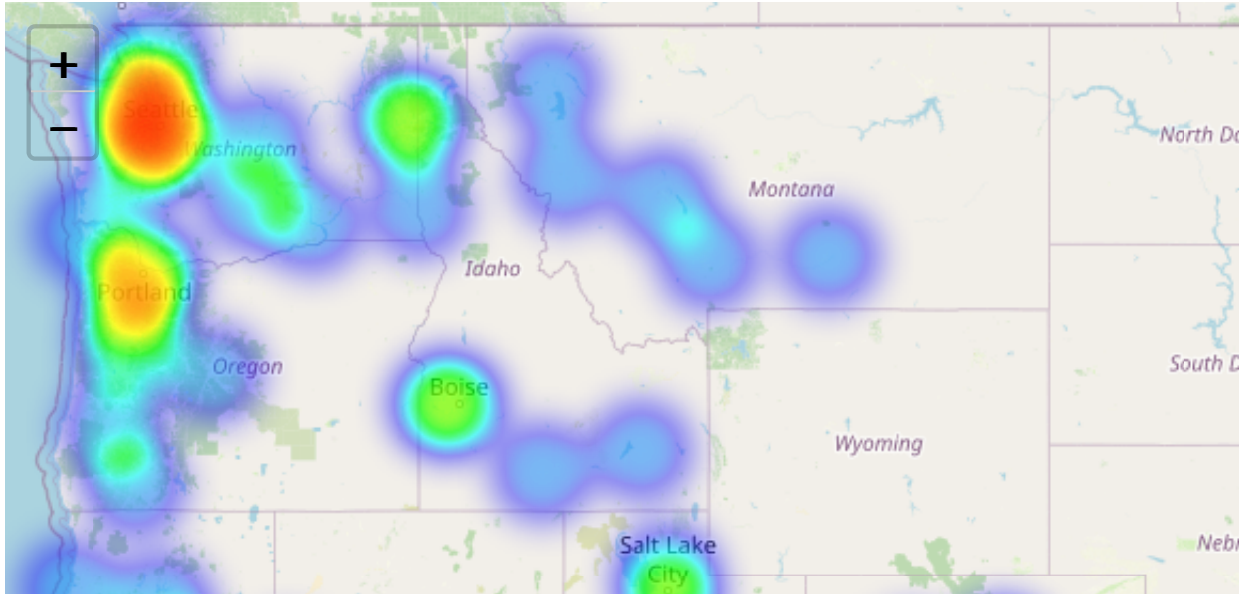
```
Out[7]:
```

	Address	City	State	Zip Code	Latitude	Longitude
0	1205 N. Memorial Parkway	Huntsville	Alabama	35801-5930	34.743095	-86.600955
1	3650 Galleria Circle	Hoover	Alabama	35244-2346	33.377649	-86.812420
2	8251 Eastchase Parkway	Montgomery	Alabama	36117	32.363889	-86.150884
3	5225 Commercial Boulevard	Juneau	Alaska	99801-7210	58.359200	-134.483000
4	330 West Dimond Blvd	Anchorage	Alaska	99515-1950	61.143266	-149.884217

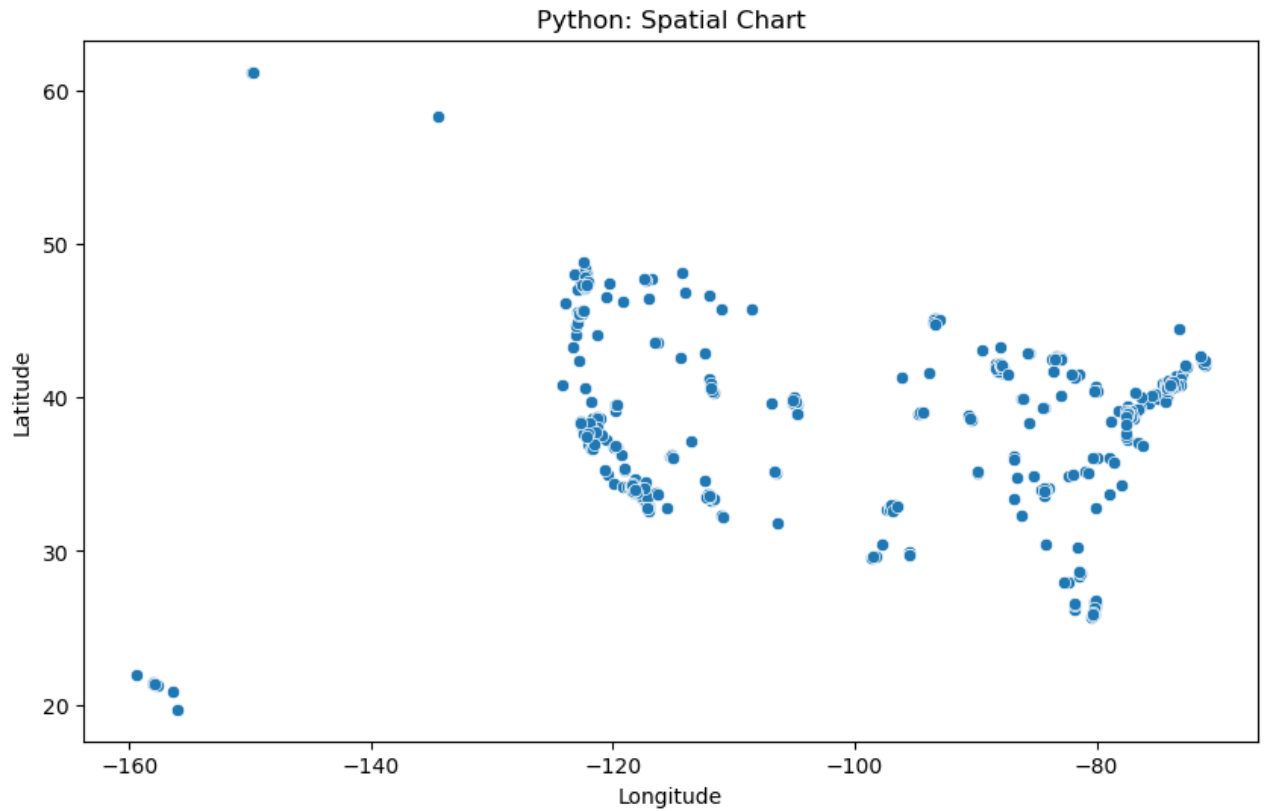
```
In [19]: # Heatmap
m = folium.Map(location=[40.75, -73.97], zoom_start=11)
heat_data = [[row['Latitude'], row['Longitude']] for index, row in data.iterrows()]
m.get_root().html.add_child(folium.Element(f"<h1>Python: Heat Map</h1>"))
HeatMap(heat_data).add_to(m)
m.save('heatmap.html')
m
```

Out [19]: Make this Notebook Trusted to load map: File -> Trust Notebook

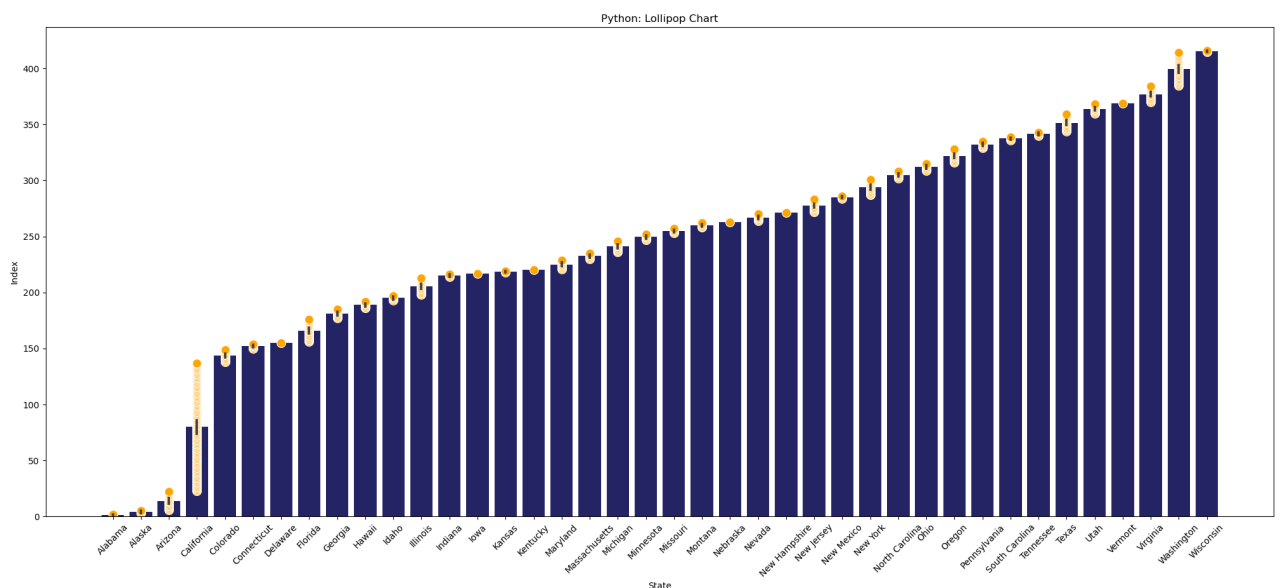
Python: Heat Map



```
In [32]: # Spatial chart
spatial_data = data[['Latitude', 'Longitude']]
plt.figure(figsize=(10, 6))
sns.scatterplot(x='Longitude', y='Latitude', data=spatial_data)
plt.title('Python: Spatial Chart')
plt.xlabel('Longitude')
plt.ylabel('Latitude')
plt.show()
```



```
In [31]: # Lollipop chart
plt.figure(figsize=(25, 10))
sns.barplot(x='State', y=data.index, data=data, color='midnightblue')
sns.scatterplot(x='State', y=data.index, data=data, color='orange', s=100)
plt.title('Python: Lollipop Chart')
plt.xlabel('State')
plt.ylabel('Index')
plt.xticks(rotation=45)
plt.show()
```



In []: