Week 7 & 8 - Assignment 4.2

PYTHON

In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import plotly.express as px
import folium
```

In [2]:
```
#Load costco data into a dataframe
costco_df = pd.read_csv('costcos-geocoded.csv')
costco_df.head(5)
```

Out[2]:

	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 [3]:
```
#Load ppg(points per game) data into a dataframe
ppg_df = pd.read_csv('ppg2008.csv')
ppg_df.head(5)
```

Out[3]:

	Name	G	MIN	PTS	FGM	FGA	FGP	FTM	FTA	FTP	...	3PA	3PP	ORB	DRB	TRB	AST	STL	Bl
0	Dwyane Wade	79	38.6	30.2	10.8	22.0	0.491	7.5	9.8	0.765	...	3.5	0.317	1.1	3.9	5.0	7.5	2.2	1
1	LeBron James	81	37.7	28.4	9.7	19.9	0.489	7.3	9.4	0.780	...	4.7	0.344	1.3	6.3	7.6	7.2	1.7	1
2	Kobe Bryant	82	36.2	26.8	9.8	20.9	0.467	5.9	6.9	0.856	...	4.1	0.351	1.1	4.1	5.2	4.9	1.5	0
3	Dirk Nowitzki	81	37.7	25.9	9.6	20.0	0.479	6.0	6.7	0.890	...	2.1	0.359	1.1	7.3	8.4	2.4	0.8	0
4	Danny Granger	67	36.2	25.8	8.5	19.1	0.447	6.0	6.9	0.878	...	6.7	0.404	0.7	4.4	5.1	2.7	1.0	1

5 rows × 21 columns

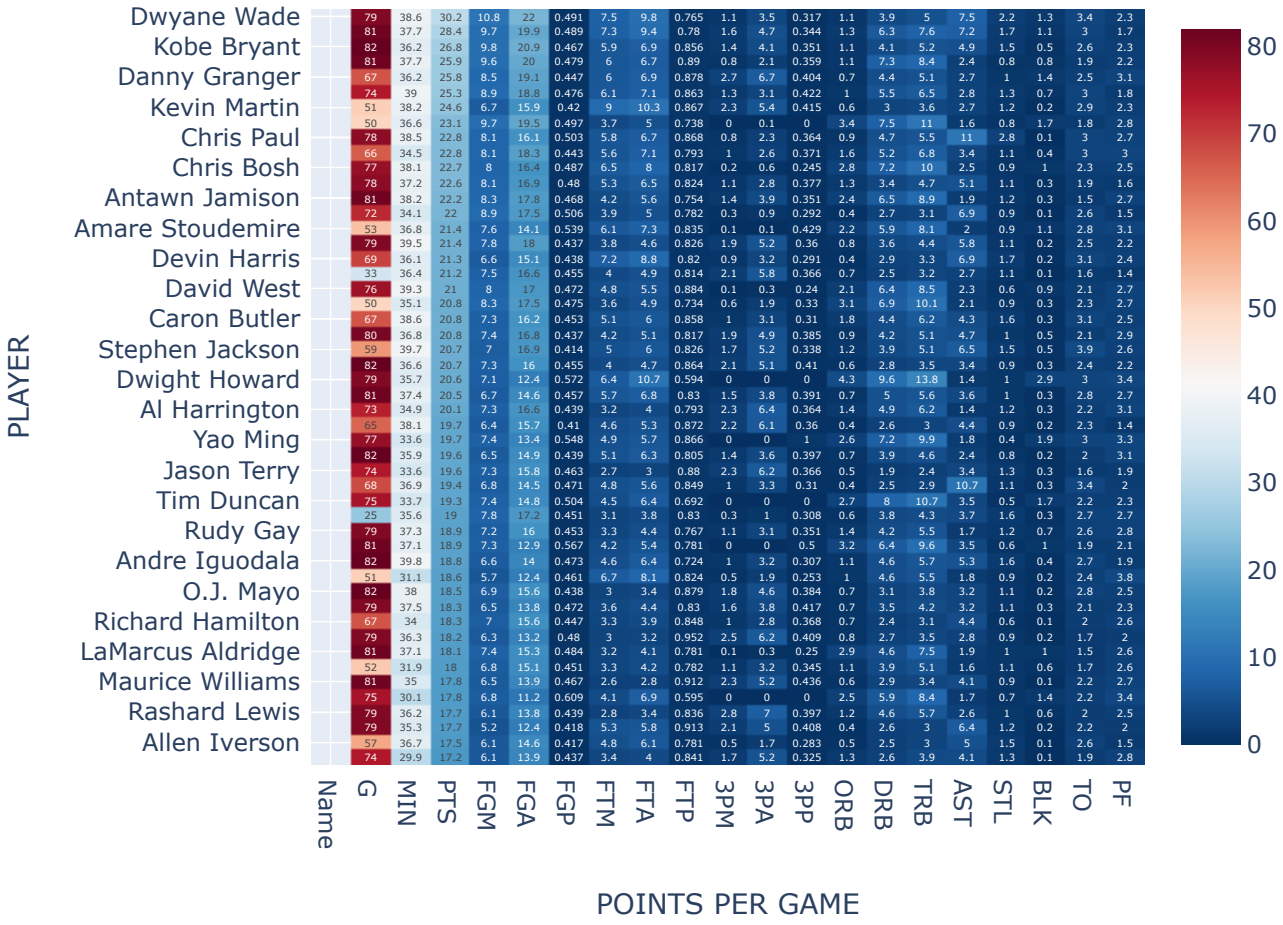
In [4]:
```
ppg_df.columns
```

Out[4]:
```
Index(['Name  ', 'G', 'MIN', 'PTS', 'FGM', 'FGA', 'FGP', 'FTM', 'FTA', 'FTP',
       '3PM', '3PA', '3PP', 'ORB', 'DRB', 'TRB', 'AST', 'STL', 'BLK', 'TO',
       'PF'],
      dtype='object')
```

Python - HeatMap

In [5]:
```
fig = px.imshow(ppg_df,text_auto=True, aspect="auto",color_continuous_scale='RdBu_r', y=
```

```
                  labels=dict(x="POINTS PER GAME", y="PLAYER"))
fig.update_layout(title = "2008 BASKETBALL PLAYER POINTS PER GAME")
fig.show()
```



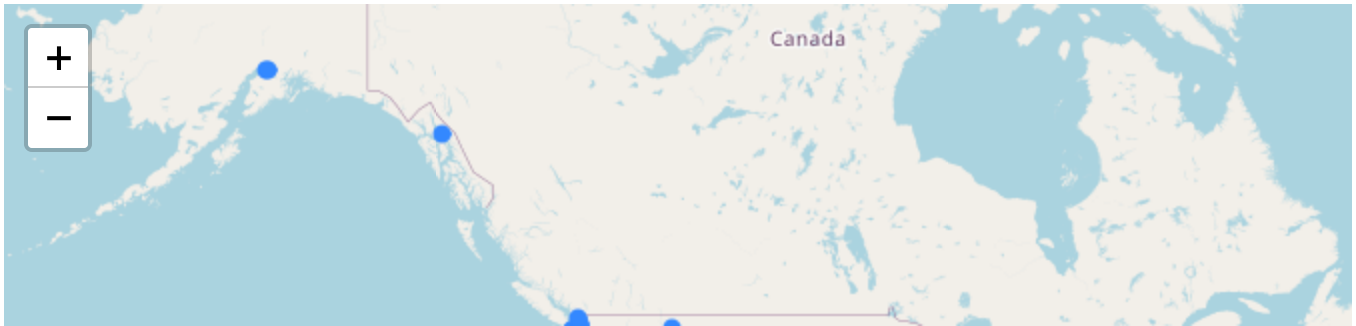
Python - Spatial Chart

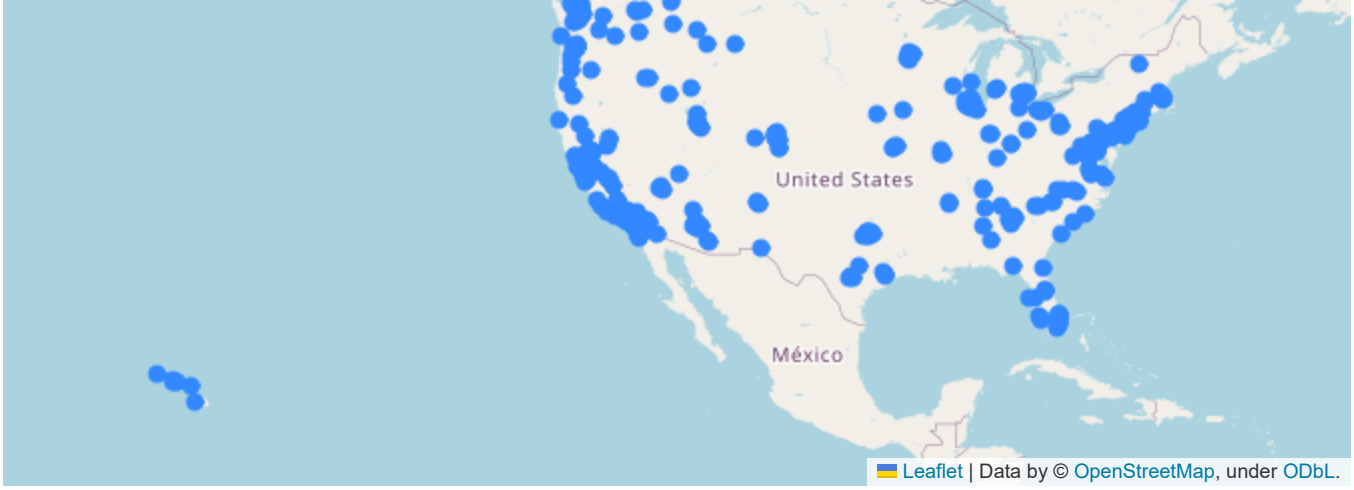
In [6]:
```
map=folium.Map(prefer_canvas=True)

def plot(point):
    folium.CircleMarker(location=[point.Latitude,point.Longitude],
                        radius=2, popup=point.Address+" "+point.City+" "+point.State+" "+
                        fill_color=point.State,
                        fill=True,
                        fill_opacity=0.7,
                        weight=5).add_to(map)
```

In [7]:
```
costco_df.apply(plot,axis=1)
map.fit_bounds(map.get_bounds())
map
```

Out[7]:





Python - Lollipop chart

In [8]:
```
plt.figure(figsize=(20,10))
plt.stem(ppg_df['Name  '], ppg_df.G, markerfmt = 's', linefmt='--', basefmt = ':')
plt.xticks(rotation=45)
plt.xlabel("Player Name", fontsize = 20)
plt.ylabel("Team - G", fontsize = 20)
plt.title("Lollipop Chart for Player points vs Team G", fontsize = 30)
plt.show()
```