

Python Plots

```
In [1]: # Import libraries
import pandas as pd
import matplotlib.pyplot as plt
import squarify
import numpy as np
from scipy.stats import kde
import squarify
import seaborn as sns
```

```
In [2]: # Import Data
costco_df = pd.read_csv('costcos-geocoded.csv')
costco_df.head()
```

```
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]: # Import Data
nba_df = pd.read_csv('ppg2008.csv')
nba_df.head()
```

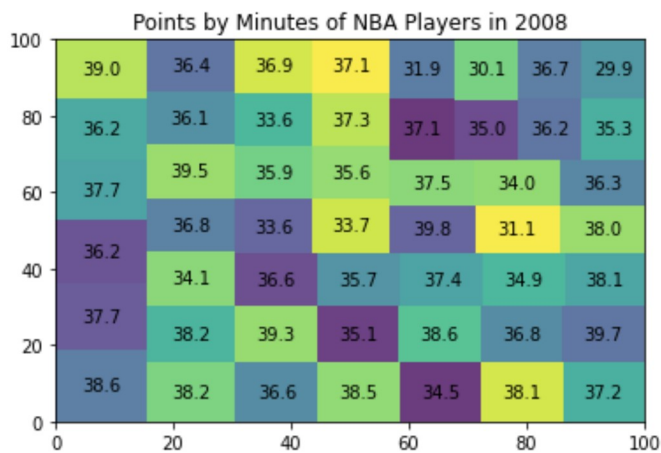
```
Out [3]:
```

	Name	G	MIN	PTS	FGM	FGA	FGP	FTM	FTA	FTP	...	3PA	3PP	ORB	DRB	TRB	AST	STL
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	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
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
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
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

5 rows × 21 columns

Heat Map

```
In [4]: squarify.plot(sizes=nba_df['PTS'], label=nba_df['MIN'], alpha=0.8)
plt.title('Points by Minutes of NBA Players in 2008')
plt.show()
```



Spatial Chart

```
In [5]: BBox = ((costco_df['Longitude'].min(), costco_df['Longitude'].max(),
costco_df['Latitude'].min(), costco_df['Latitude'].max()))
print(BBox)

(-159.3799149, -71.066458, 19.687344, 61.2108150000000004)
```

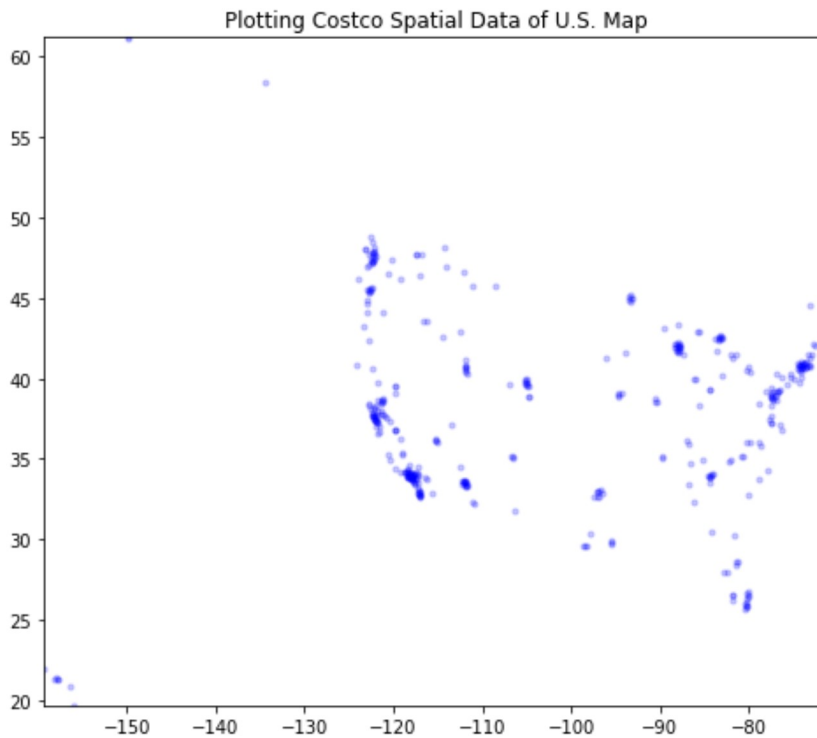
```
In [6]: ruh_m = plt.imread('map.png')
```

```
In [12]: fig, ax = plt.subplots(figsize = (8,7))
ax.scatter(costco_df['Longitude'], costco_df['Latitude'], zorder=1, alpha=0.2, c='b', s=10)

ax.set_title('Plotting Costco Spatial Data of U.S. Map')
ax.set_xlim(BBox[0], BBox[1])
ax.set_ylim(BBox[2], BBox[3])

#ax.imshow(ruh_m, zorder = 0, extent = BBox, aspect = 'equal')
```

Out[12]: (19.687344, 61.2108150000000004)



Contour Plot

```
In [14]: [X,Y] = np.meshgrid(nba_df['PTS'], nba_df['MIN'])
fig, ax = plt.subplots(1,1)
Z = np.cos(X/2) + np.sin(Y/4)
ax.contour(X,Y,Z)
ax.set_title('Contour Plot')
ax.set_xlabel('NBA Pts')
ax.set_ylabel('NBA Mins')
plt.show()
```

