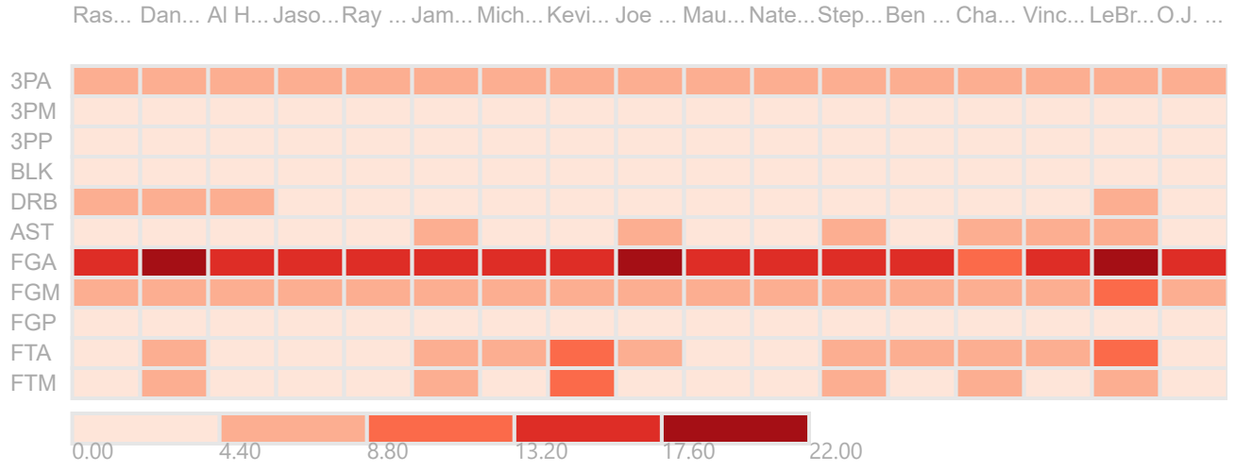
PowerBI-HeatMap

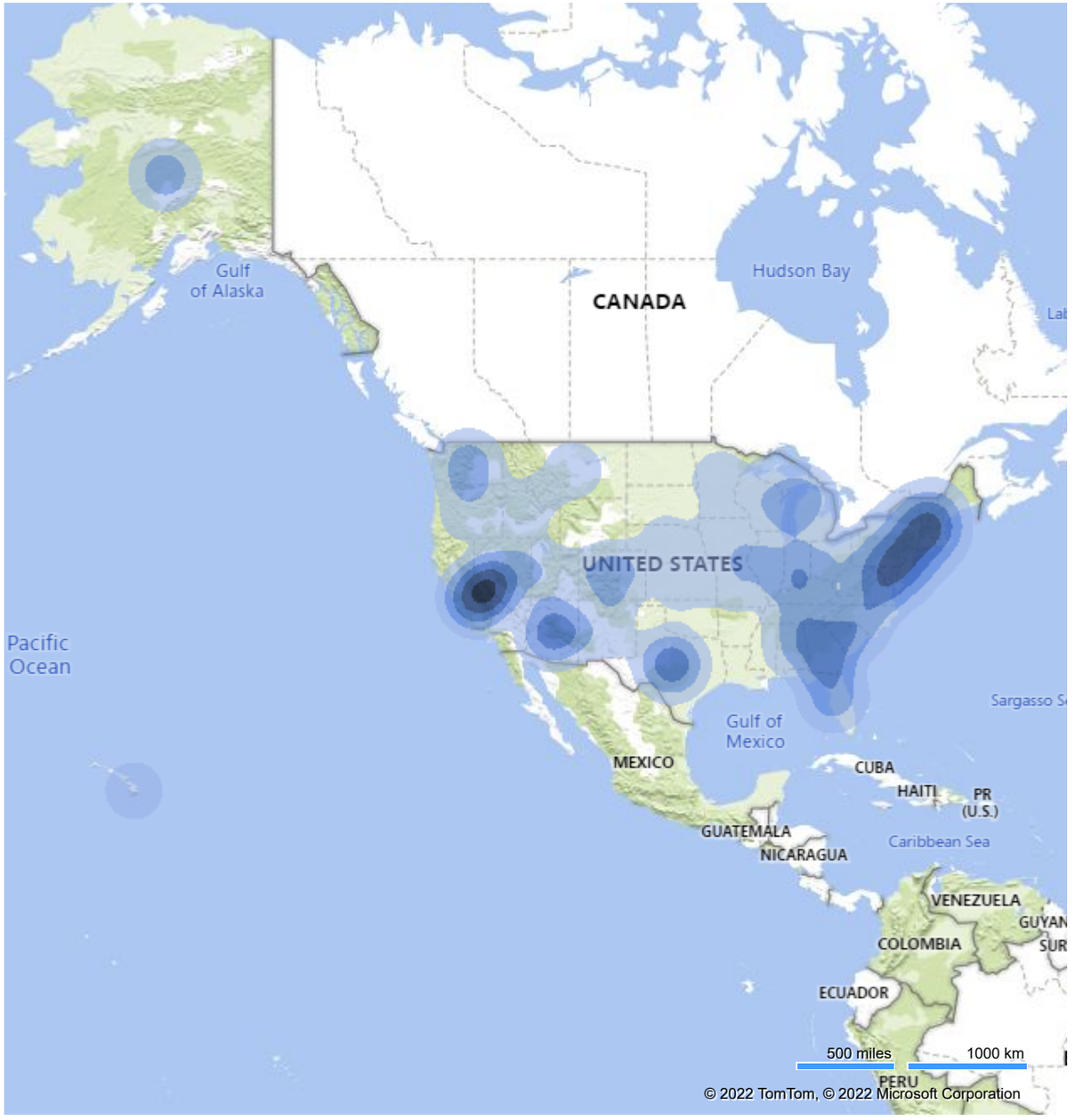


PowerBI-HeatMap-Names

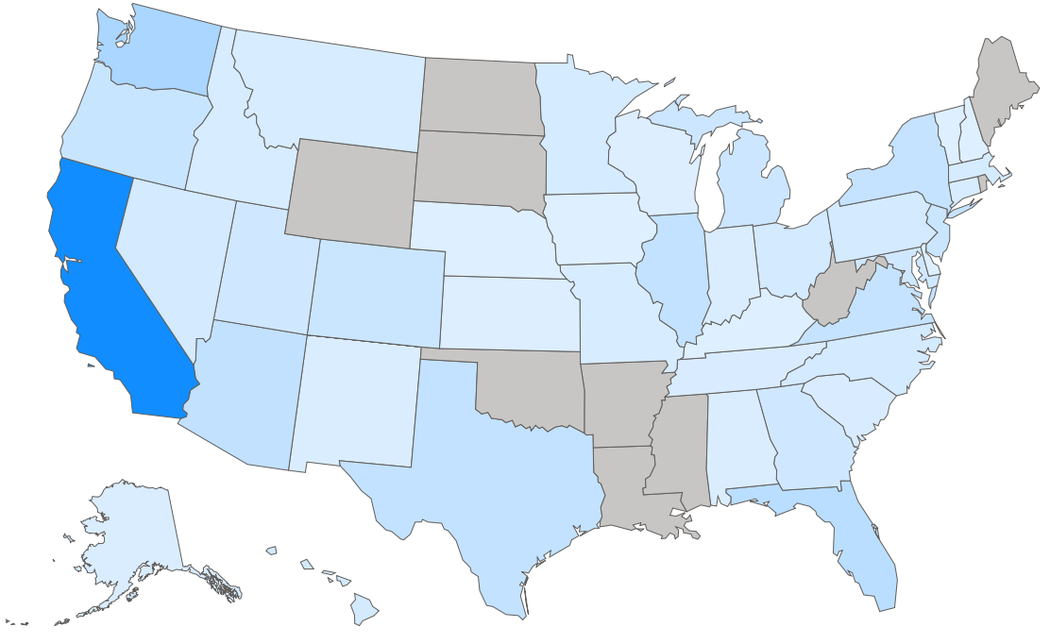
Name	3PA	3PM	3PP	AST	BLK
Rashard Lewis	7.00	2.80	0.40	2.60	0.60
Danny Granger	6.70	2.70	0.40	2.70	1.40
Al Harrington	6.40	2.30	0.36	1.40	0.30
Jason Terry	6.20	2.30	0.37	3.40	0.30
Ray Allen	6.20	2.50	0.41	2.80	0.20
Jamal Crawford	6.10	2.20	0.36	4.40	0.20
Michael Redd	5.80	2.10	0.37	2.70	0.10
Kevin Martin	5.40	2.30	0.42	2.70	0.20
Joe Johnson	5.20	1.90	0.36	5.80	0.20
Maurice Williams	5.20	2.30	0.44	4.10	0.10
Nate Robinson	5.20	1.70	0.33	4.10	0.10
Stephen Jackson	5.20	1.70	0.34	6.50	0.50
Ben Gordon	5.10	2.10	0.41	3.40	0.30
Chauncey Billups	5.00	2.10	0.41	6.40	0.20
Vince Carter	4.90	1.90	0.39	4.70	0.50
LeBron James	4.70	1.60	0.34	7.20	1.10
O.J. Mayo	4.60	1.80	0.38	3.20	0.20
Kobe Bryant	4.10	1.40	0.35	4.90	0.50
Antawn Jamison	3.90	1.40	0.35	1.90	0.30
John Salmons	3.80	1.60	0.42	3.20	0.30
Paul Pierce	3.80	1.50	0.39	3.60	0.30
Richard Jefferson	3.60	1.40	0.40	2.40	0.20
Dwyane Wade	3.50	1.10	0.32	7.50	1.30
Deron Williams	3.30	1.00	0.31	10.70	0.30
Andre Iguodala	3.20	1.00	0.31	5.30	0.40
Devin Harris	3.20	0.90	0.29	6.90	0.20
Josh Howard	3.20	1.10	0.35	1.60	0.60
Caron Butler	3.10	1.00	0.31	4.30	0.30
Kevin Durant	3.10	1.30	0.42	2.80	0.70
Rudy Gay	3.10	1.10	0.35	1.70	0.70
Brandon Roy	2.80	1.10	0.38	5.10	0.30
Richard Hamilton	2.80	1.00	0.37	4.40	0.10
Carmelo Anthony	2.60	1.00	0.37	3.40	0.40
Chris Paul	2.30	0.80	0.36	11.00	0.10
Total	**161.20**	**59.50**	**17.00**	**192.90**	**29.90**

PowerBI-SpatialChart

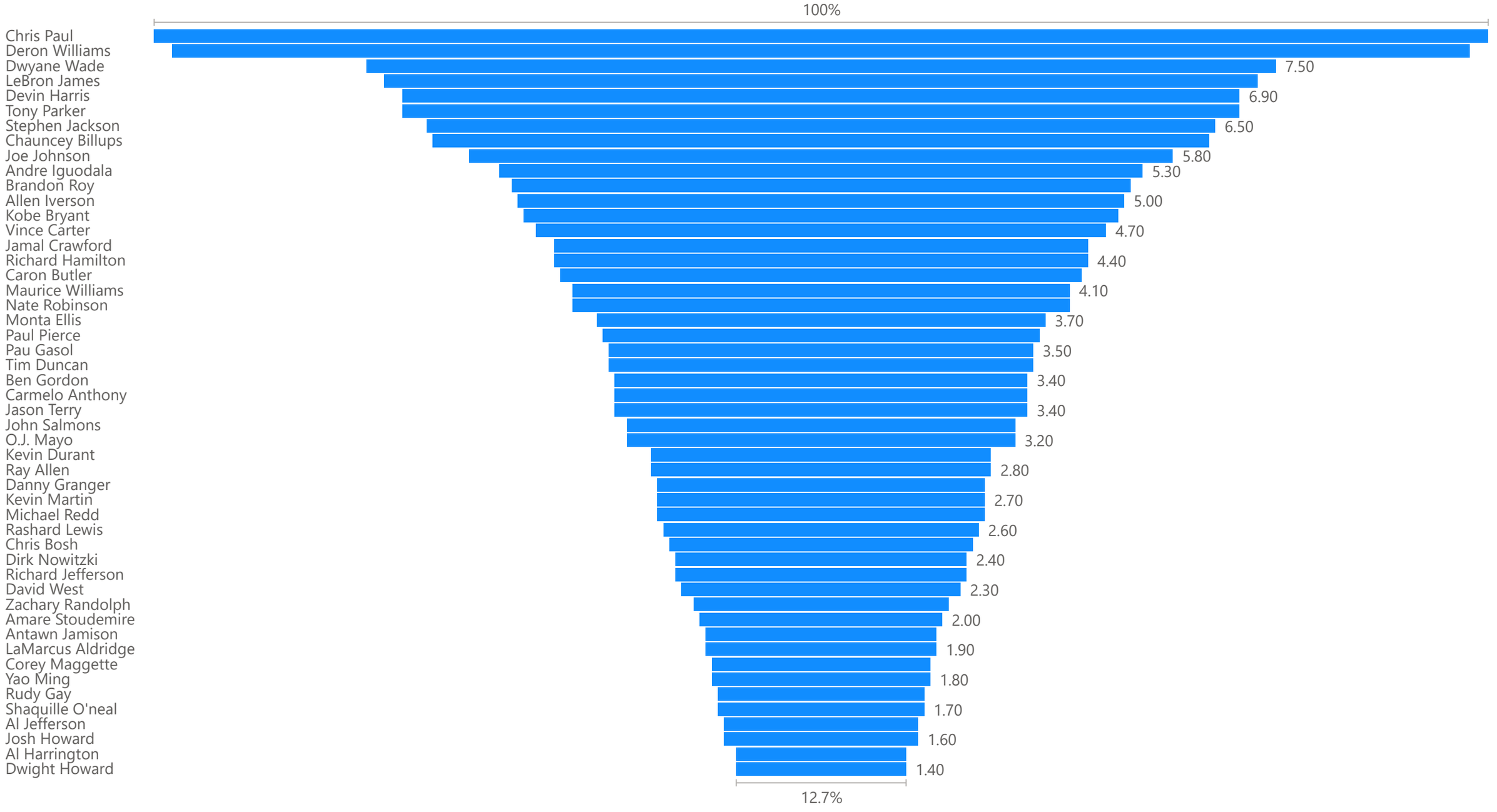
54/54 displayed



PowerBI-SpatialChart-StoreCount by State



PowerBI-Funnel Map



Python Plots

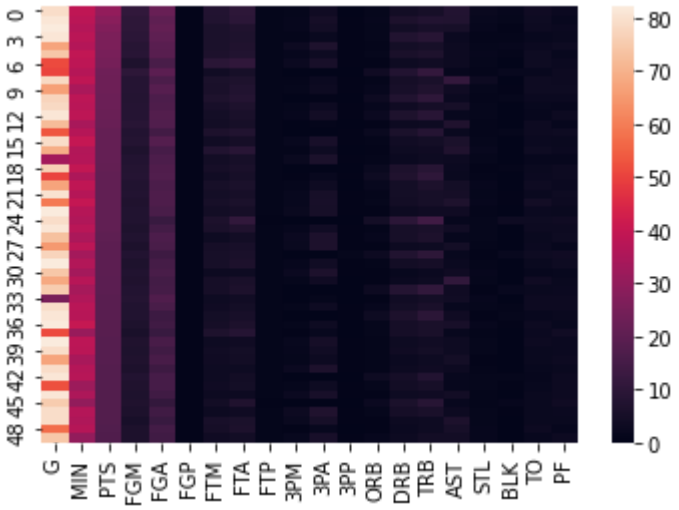
In [1]:
```
#Libraries
import pandas as pd
import matplotlib.pyplot as plt
import matplotlib as mpl
import numpy as np
import chart_studio.plotly as py
import cufflinks as cf
import seaborn as sns
import plotly.offline as plo
```

In [2]:
```
#read CSV files
costco = pd.read_csv("costcos-geocoded.csv")
ppg = pd.read_csv("ppg2008.csv")


costco_sum = pd.Series.to_frame(costco.groupby('State')['Address'].count())
costco_sum = costco_sum.rename({'Address':'store_count'}, axis=1, inplace=False)
costco_sum = pd.DataFrame(costco_sum.to_records())
```

Python - Heat Map

In [3]:
```
sns.heatmap(ppg.iloc[:,1:])
```

Out[3]: <AxesSubplot:>



Python - Spatial Plot

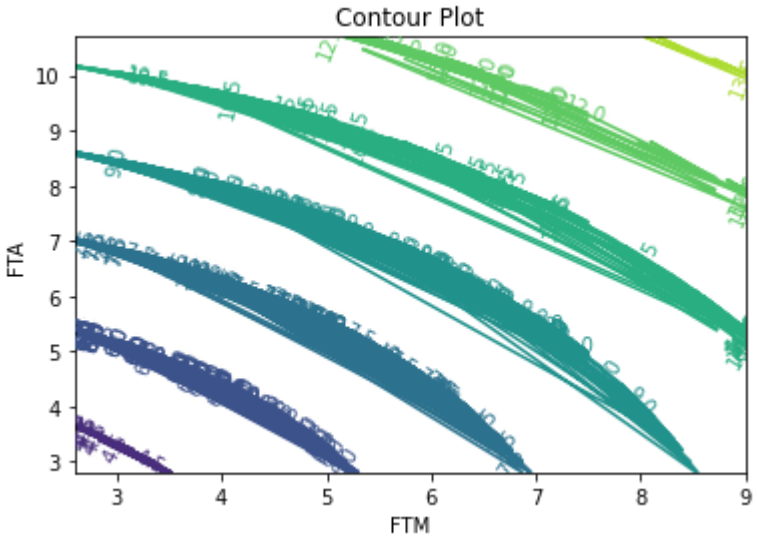
In [4]:
```
data=[dict(type='choropleth', autocolorscale = False,
           locations=costco_sum['State'], z=costco_sum['store_count'],
           locationmode='USA-states', colorscale='YlOrRd',
           colorbar=dict(title='Store Count'))]
```

```
layout = dict(title='Costco Store Count',
              geo=dict(scope='usa', projection=dict(type='albers usa'),
                       showlakes=True, lakecolor='rgb(66,165,245)'))

fig=dict(data=data, layout=layout)

plo.plot(fig)
```

Out[4]: 'temp-plot.html'

Python - Contour chart

In [5]:
```
%matplotlib inline


def f(x, y):
    return np.sqrt(x**2 + y**2)

x = np.array(ppg['FTM'])
y = np.array(ppg['FTA'])

X, Y = np.meshgrid(x, y)
Z = f(X, Y)

plt.figure()
cp = plt.contour(X, Y, Z)
plt.clabel(cp, inline=True,
          fontsize=10)
plt.title('Contour Plot')
plt.xlabel('FTM')
plt.ylabel('FTA')
plt.show()
```



R Plots

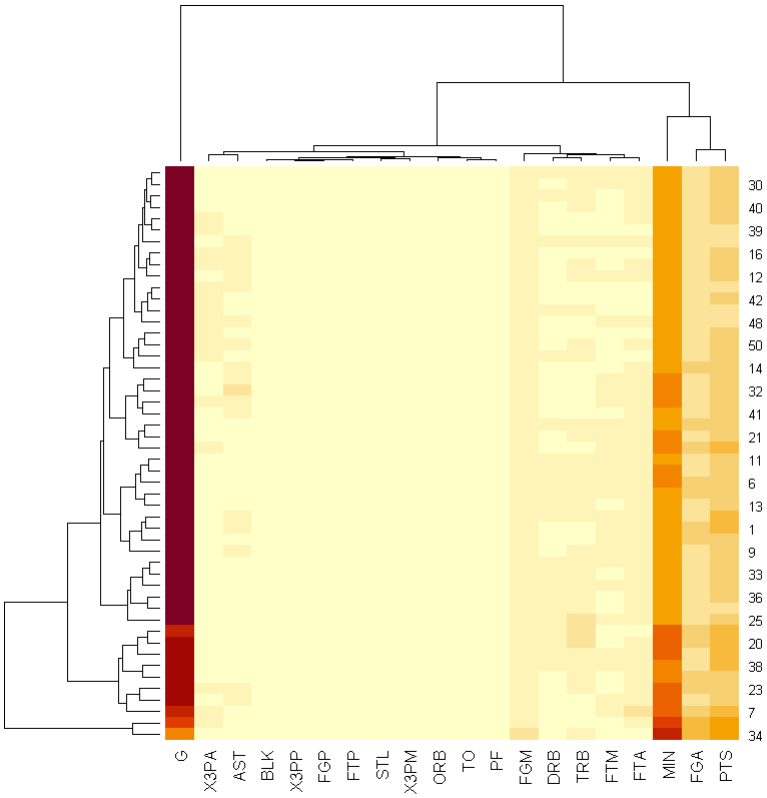
In [1]:
```
library('magrittr')
library('ggmap')
library('ggplot2')
library('usmap')
```

```
Loading required package: ggplot2

Google's Terms of Service: https://cloud.google.com/maps-platform/terms/.

Please cite ggmap if you use it! See citation("ggmap") for details.


Attaching package: 'ggmap'


The following object is masked from 'package:magrittr':

    inset
```

In [2]:
```
costco <- read.csv('costcos-geocoded.csv')
ppg <- read.csv('ppg2008.csv')
costco_sum <- costco %>%
  dplyr::mutate(state = State) %>%
  dplyr::group_by(state) %>%
  dplyr::summarise(store_count = dplyr::n())
```

R- Heat Map

In [3]:
```
# options(repr.plot.width = 10, repr.plot.height = 7)
heatmap(as.matrix(ppg[,2:ncol(ppg)]))
```

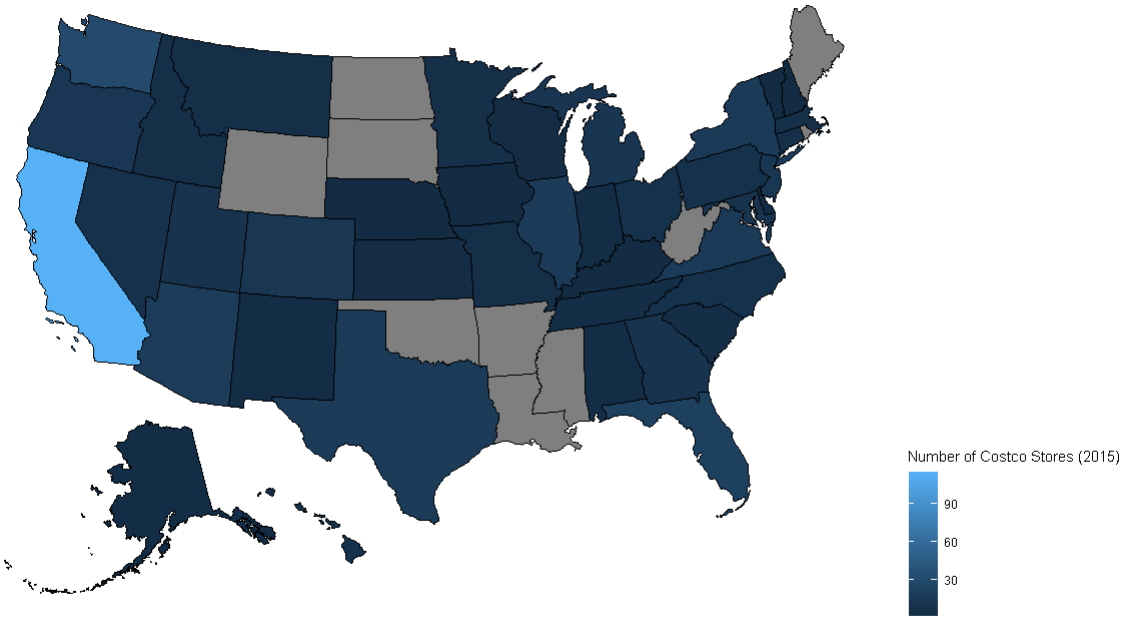


R - Spatial Chart

In [4]:

```
options(repr.plot.width = 10, repr.plot.height = 7)

plot_usmap(data = costco_sum, values = "store_count", lines = "white") +
  scale_fill_continuous(name = "Number of Costco Stores (2015)", label = scales::comma)
  theme(legend.position = "right")
```

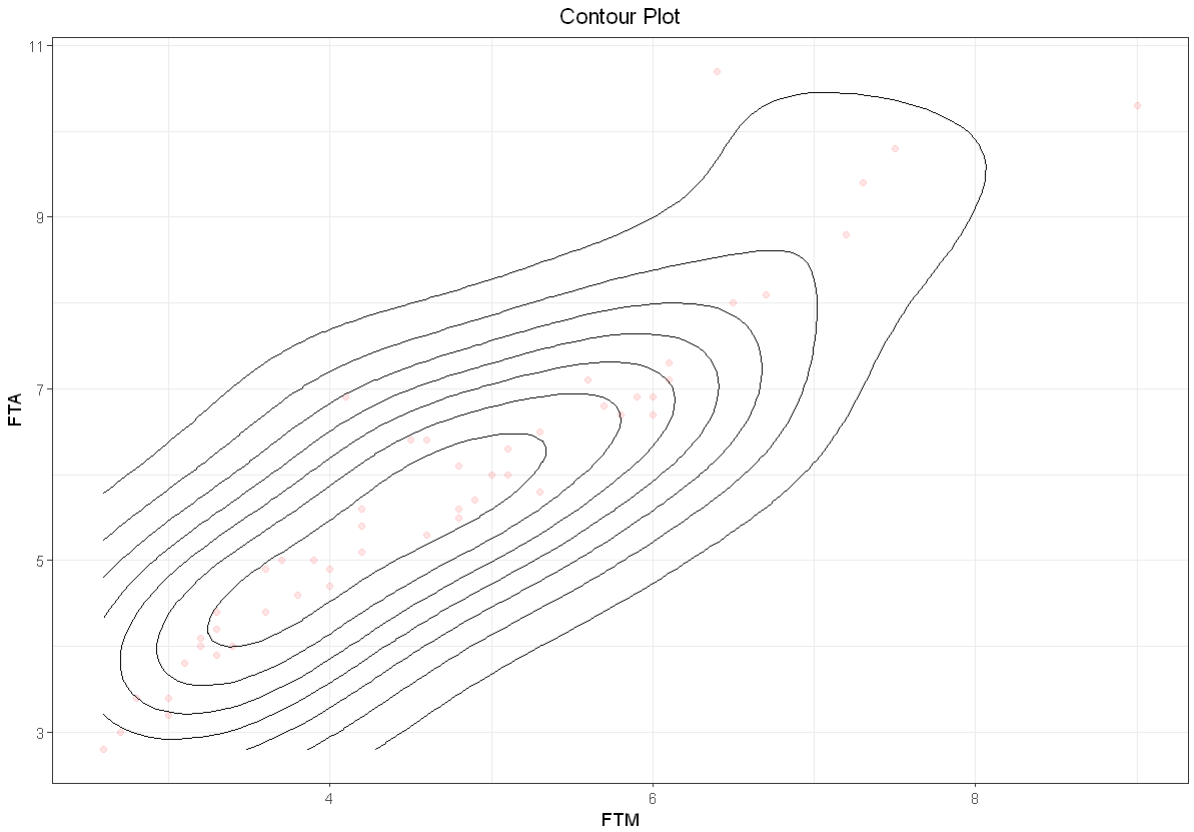
```
Warning message:
"Ignoring unknown parameters: lines"
```



R - Contour plot

In [5]:

```
options(repr.plot.width = 10, repr.plot.height = 7)
ggplot(ppg, aes(x=FTM, y=FTA))+
  theme_bw()+
  geom_point(alpha=0.1, col='red')+
  geom_density2d(color='black')+
  ggtitle('Contour Plot')+
  theme(plot.title = element_text(hjust = 0.5))+
  labs(x='FTM', y='FTA')
```


Contour Plot
FTA
FTM
11
9
7
5
3
4
6
8