PowerBI-HeatMap

PowerBI-HeatMap-Names
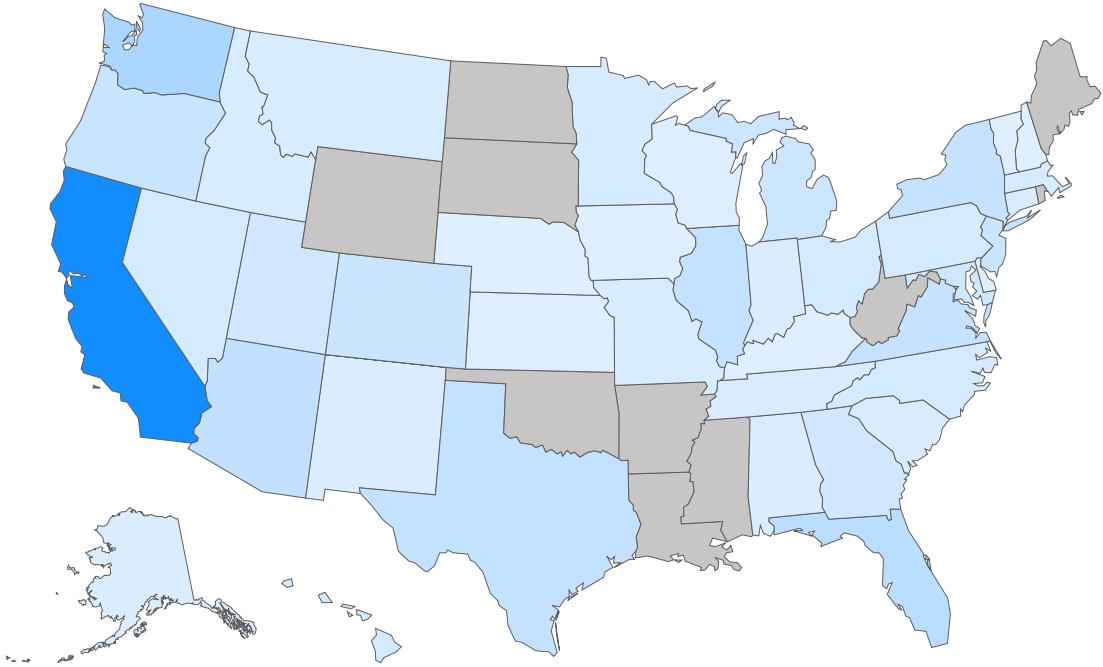
Name	3PA	3PM	3PP	AST	BLK
Rashard Lewis	7.00	2.80	0.40	2.60	0.60
Danny Granger	6.70	2.70	0.40	2.70	1.40
Al Harrington	6.40	2.30	0.36	1.40	0.30
Jason Terry	6.20	2.30	0.37	3.40	0.30
Ray Allen	6.20	2.50	0.41	2.80	0.20
Jamal Crawford	6.10	2.20	0.36	4.40	0.20
Michael Redd	5.80	2.10	0.37	2.70	0.10
Kevin Martin	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
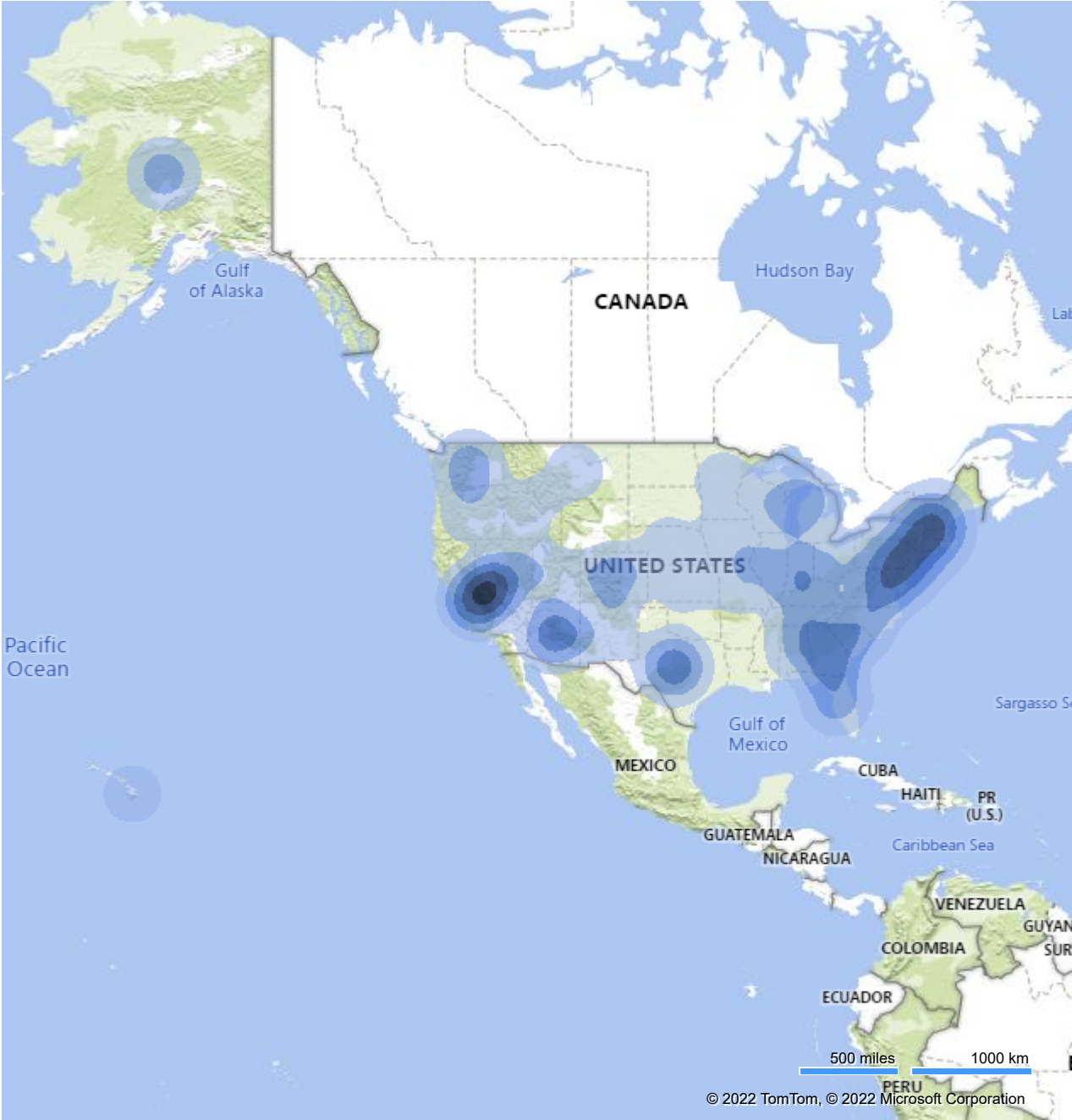
PowerBI-SpatialChart-StoreCount by State

PowerBI-Funnel Map

100%

Player	Value
Chris Paul	
Deron Williams	
Dwyane Wade	7.50
LeBron James	
Devin Harris	6.90
Tony Parker	
Stephen Jackson	6.50
Chauncey Billups	
Joe Johnson	5.80
Andre Iguodala	5.30
Brandon Roy	
Allen Iverson	5.00
Kobe Bryant	
Vince Carter	4.70
Jamal Crawford	
Richard Hamilton	4.40
Caron Butler	
Maurice Williams	4.10
Nate Robinson	
Monta Ellis	3.70
Paul Pierce	
Pau Gasol	3.50
Tim Duncan	
Ben Gordon	3.40
Carmelo Anthony	
Jason Terry	3.40
John Salmons	
O.J. Mayo	3.20
Kevin Durant	
Ray Allen	2.80
Danny Granger	
Kevin Martin	2.70
Michael Redd	
Rashard Lewis	2.60
Chris Bosh	
Dirk Nowitzki	2.40
Richard Jefferson	
David West	2.30
Zachary Randolph	
Amare Stoudemire	2.00
Antawn Jamison	
LaMarcus Aldridge	1.90
Corey Maggette	
Yao Ming	1.80
Rudy Gay	
Shaquille O'neal	1.70
Al Jefferson	
Josh Howard	1.60
Al Harrington	
Dwight Howard	1.40

12.7%

Python Plots

In [1]:
```python
#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
```
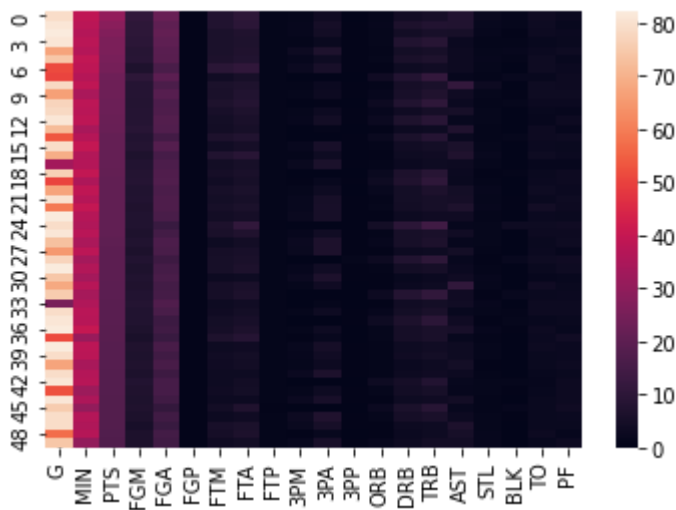
In [2]:
```python
#read CSV files
costco = pd.read_csv("costcos-geocoded.csv")
ppg = pd.read_csv("ppg2008.csv")


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

Out[3]:   <AxesSubplot:>

Python - Spatial Plot

In [4]:
```python
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
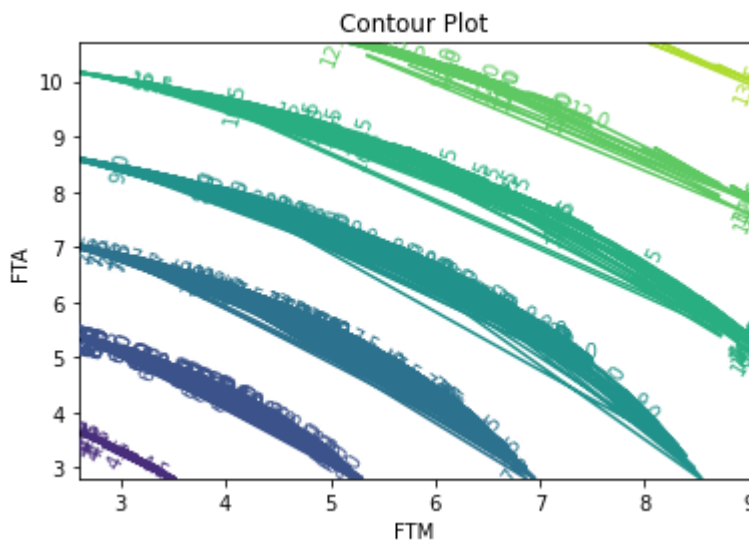
In [5]:
```
%matplotlib inline


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]:
```r
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]:
```r
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]:
```r
# options(repr.plot.width = 10, repr.plot.height = 7)
heatmap(as.matrix(ppg[,2:ncol(ppg)]))
```
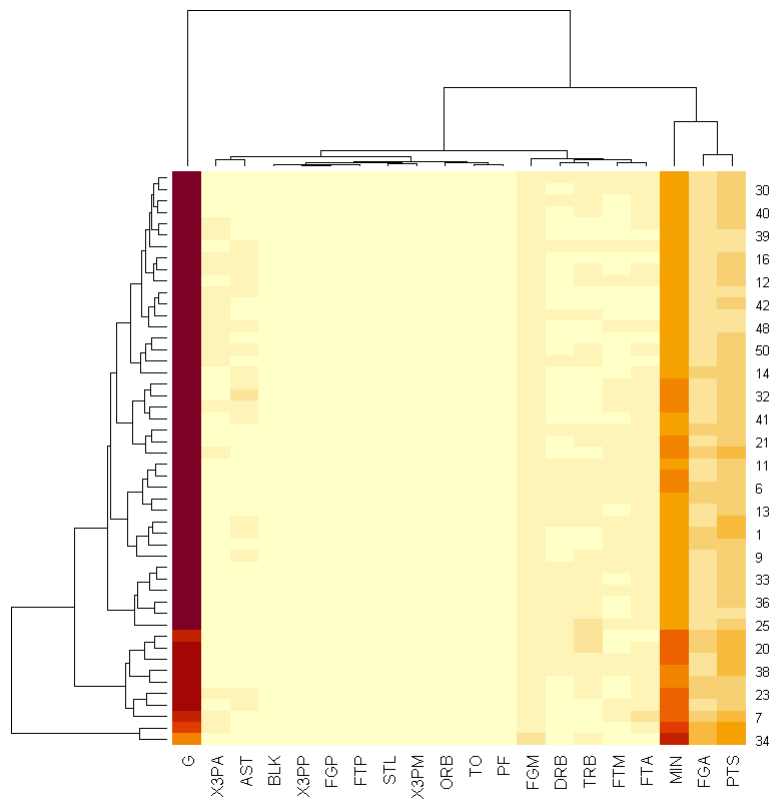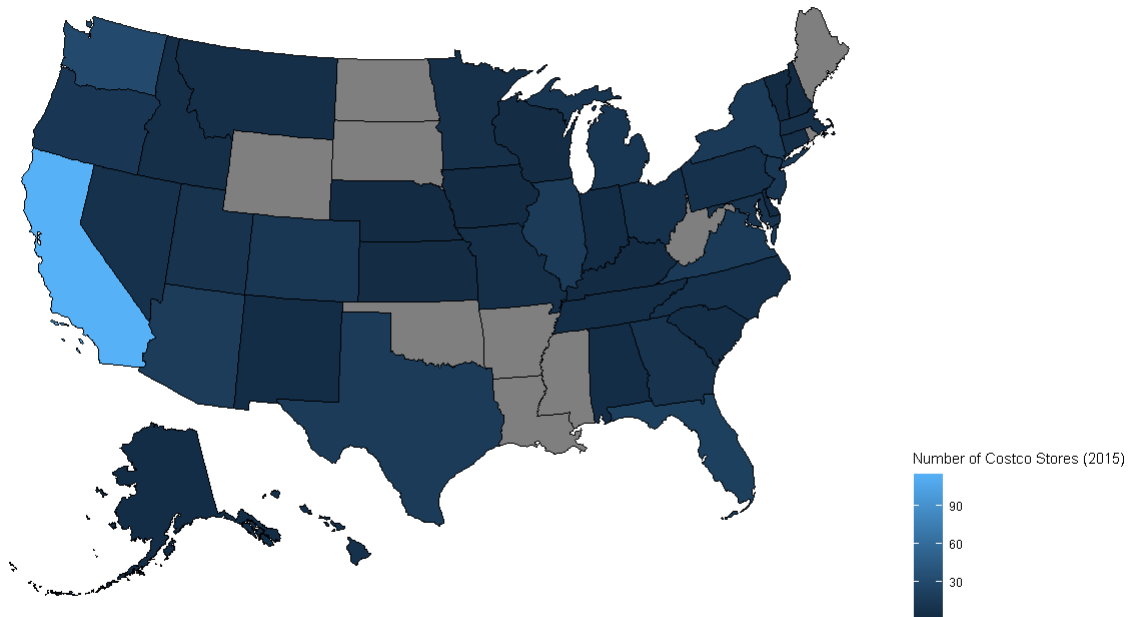
R - Spatial Chart

In [4]:
```r
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")
```
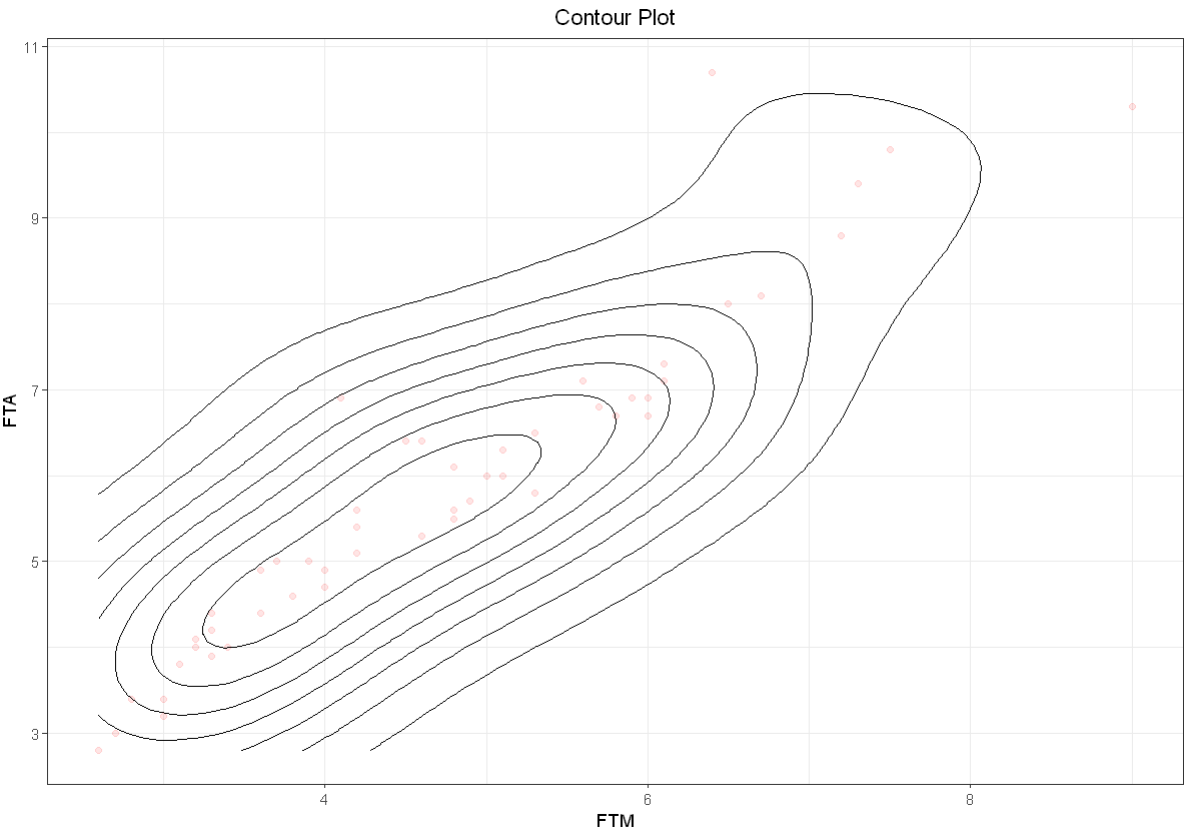
```
Warning message:
"Ignoring unknown parameters: lines"
```

R - Contour plot

In [5]:
```r
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

Python-Spatial Plot

Store Count