

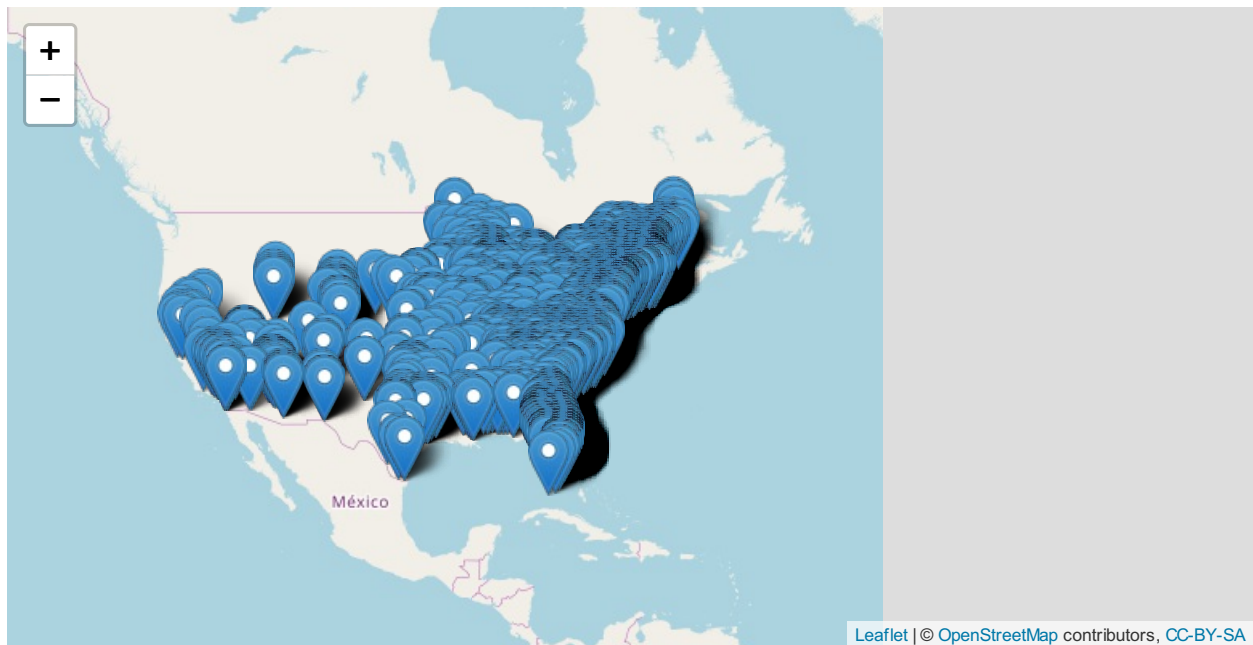
partial_pdf

me

11/30/2019

Dunkin' Leaflet

```
dnknloc %>%  
  leaflet(width = "100%", options = leafletOptions(zoomSnap = 0.1)) %>%  
  setView(lng = -100, lat = 40, zoom = 3) %>%  
  addTiles() %>%  
  addMarkers(~Longitude, ~Latitude, popup = dnknLabel, label = dnknLabel)
```



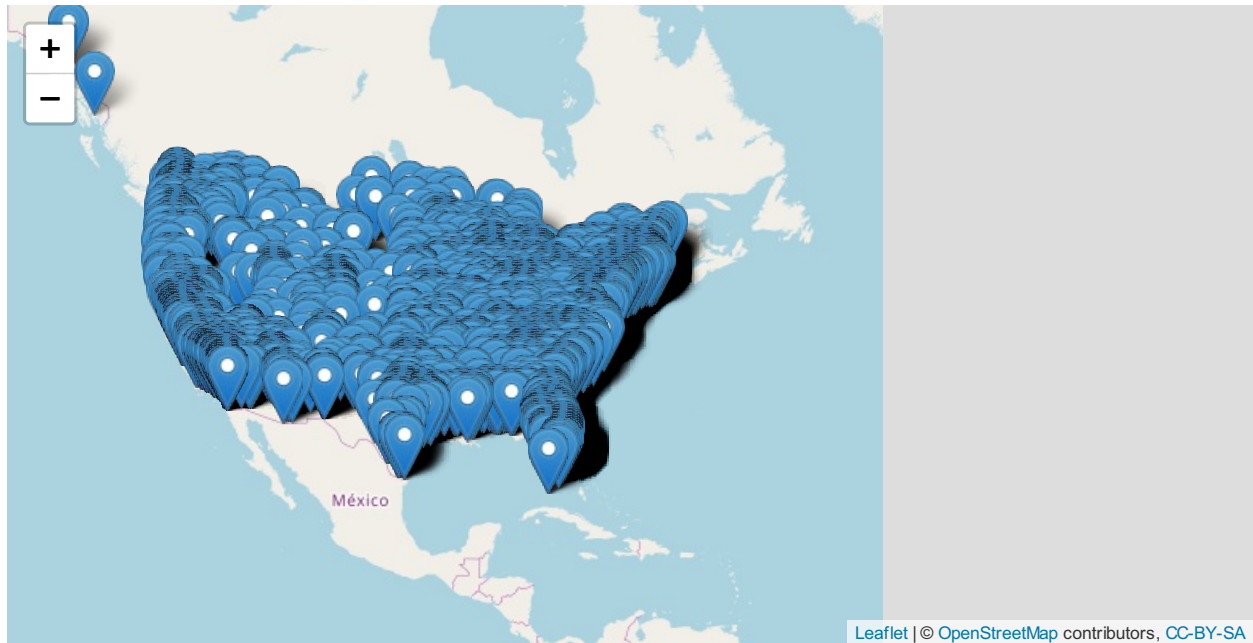
Starbucks Leaflet

```
sbuxloc %>%  
  leaflet(width = "100%", options = leafletOptions(zoomSnap = 0.1)) %>%
```

```

setView(lng = -100, lat = 40, zoom = 3) %>%
addTiles() %>%
addMarkers(~Longitude, ~Latitude, popup = sbuxLabel, label = sbuxLabel)

```



Locations Graphs

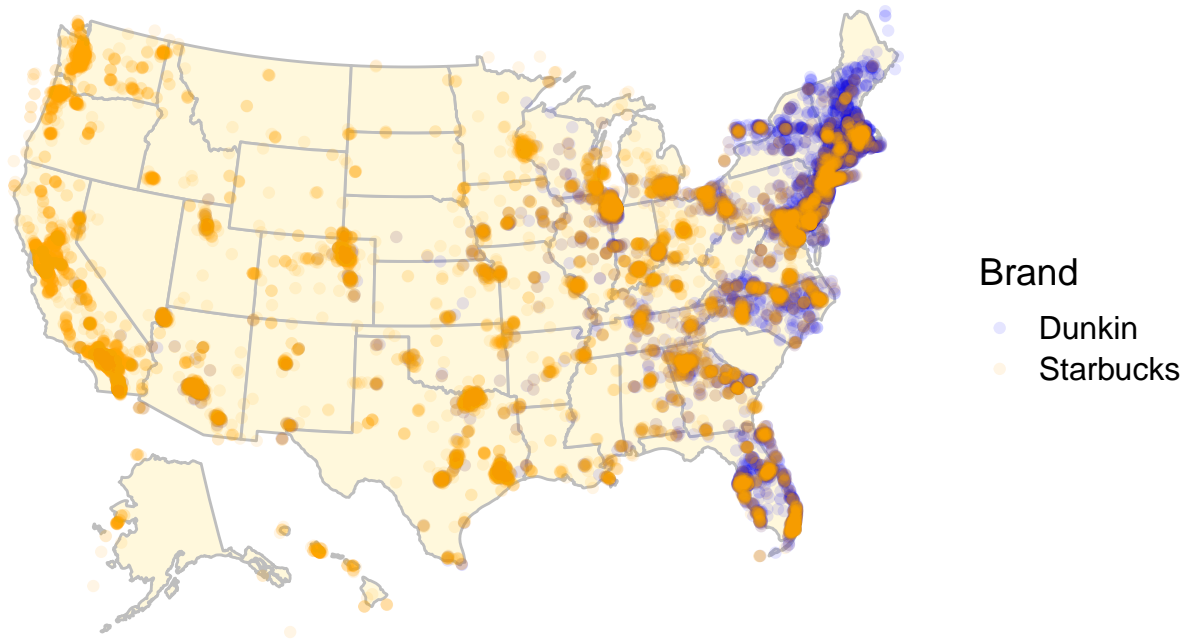
```

ggplot() +
  geom_polygon(data = us_map(regions = "states"), mapping = aes(x = x, y = y, group = group), color = "blue", alpha = 0.1) +
  geom_point(data = modified_values, mapping = aes(x = long, y = lat, color = Store), alpha = 0.1) +
  coord_equal() +
  theme_map() +
  scale_color_manual(values = c("blue", "orange")) +
  labs(title = "Restuarant Locations in the US",
       subtitle = "Dunkin' vs Starbucks") +
  guides(color = guide_legend(title = "Brand")) +
  theme(plot.title = element_text(hjust = 0.5),
       plot.subtitle = element_text(hjust = 0.5))

```

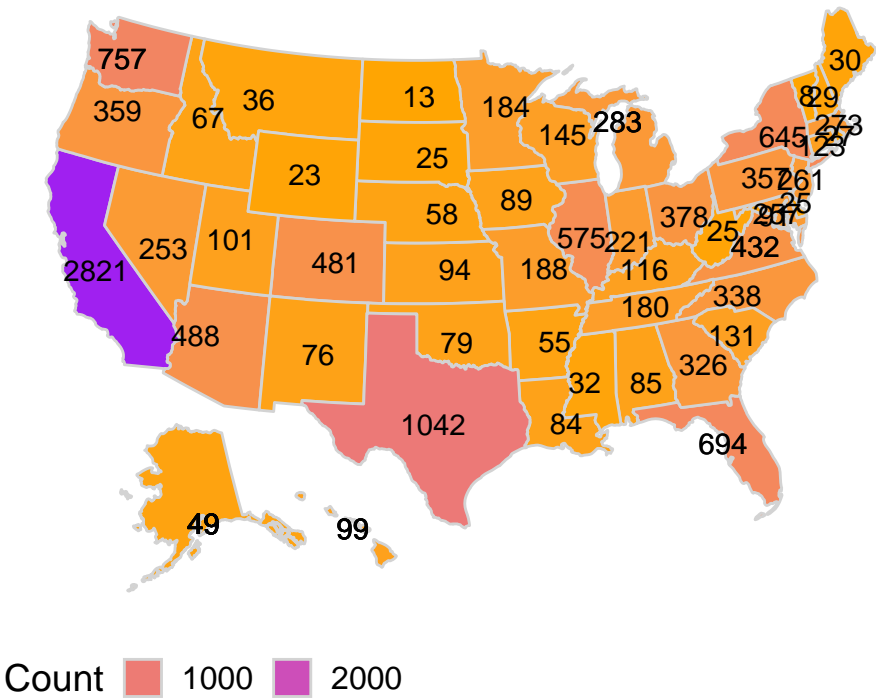
Restuarant Locations in the US

Dunkin' vs Starbucks



US Starbuck's Location

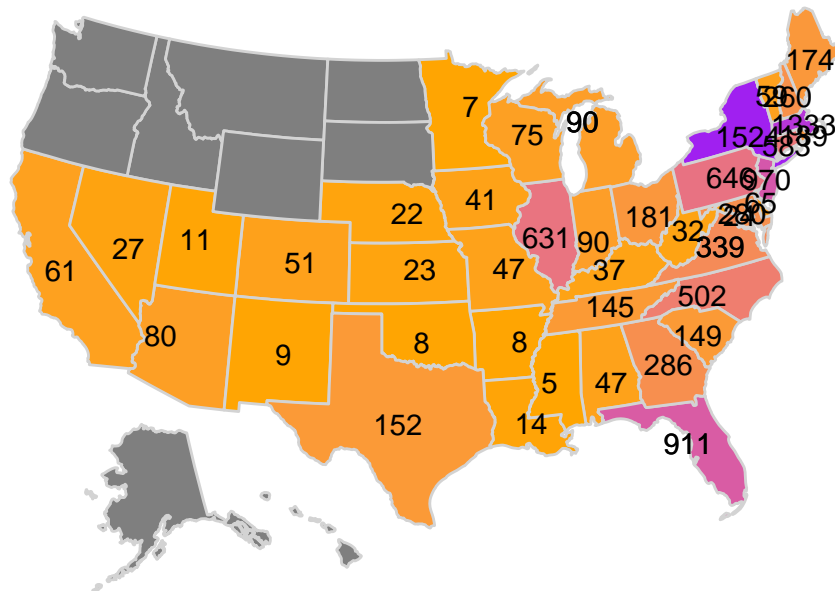
Average # of Stores



Warning: NAs introduced by coercion

US Dunkin' Donut's Location

Average # of Stores

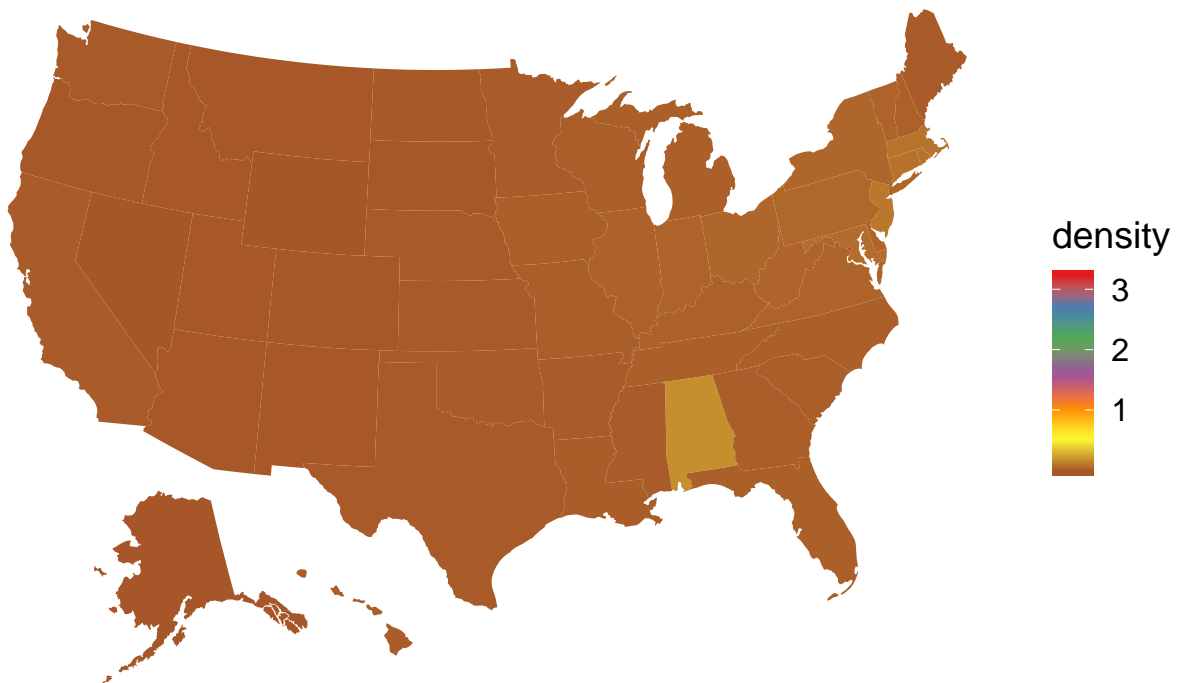


Average ■ 500 ■ 1000 ■ 1500

Density with DC

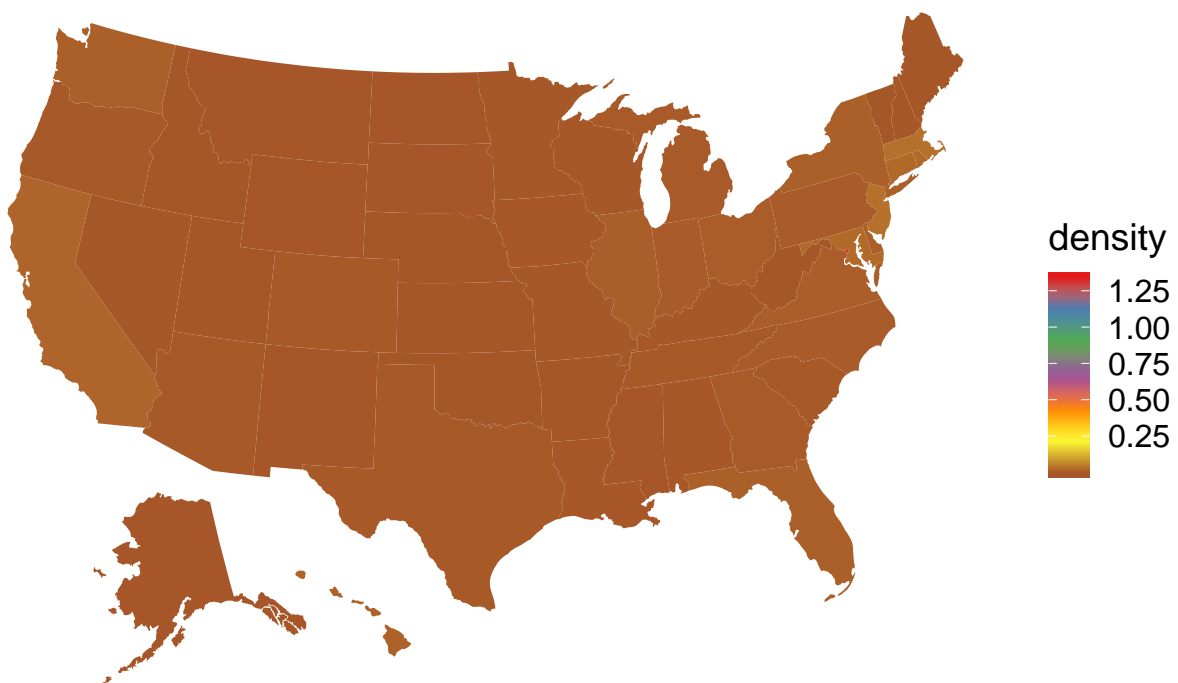
```
DNKN_loc %>%
  ggplot(mapping = aes(x = x, y = y, group = group, fill = density)) +
  geom_polygon() +
  coord_equal() +
  theme_map() +
  scale_fill_distiller(palette = "Set1") +
  labs(title = "Dunkin' Locations") +
  theme(plot.title = element_text(hjust = 0.5))
```

Dunkin' Locations



```
SBUX_loc %>%  
  ggplot(mapping = aes(x = x, y = y, group = group, fill = density)) +  
  geom_polygon() +  
  coord_equal() +  
  theme_map() +  
  scale_fill_distiller(palette = "Set1") +  
  labs(title = "Starbucks Locations") +  
  theme(plot.title = element_text(hjust = 0.5))
```

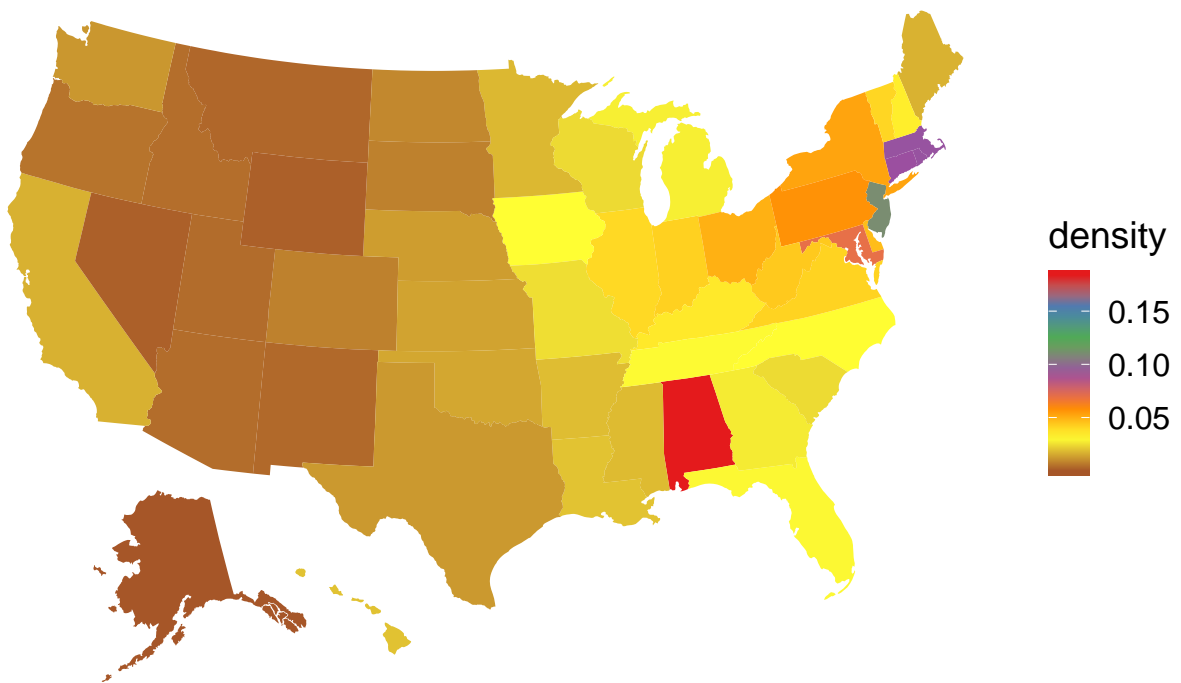
Starbucks Locations



Density without DC

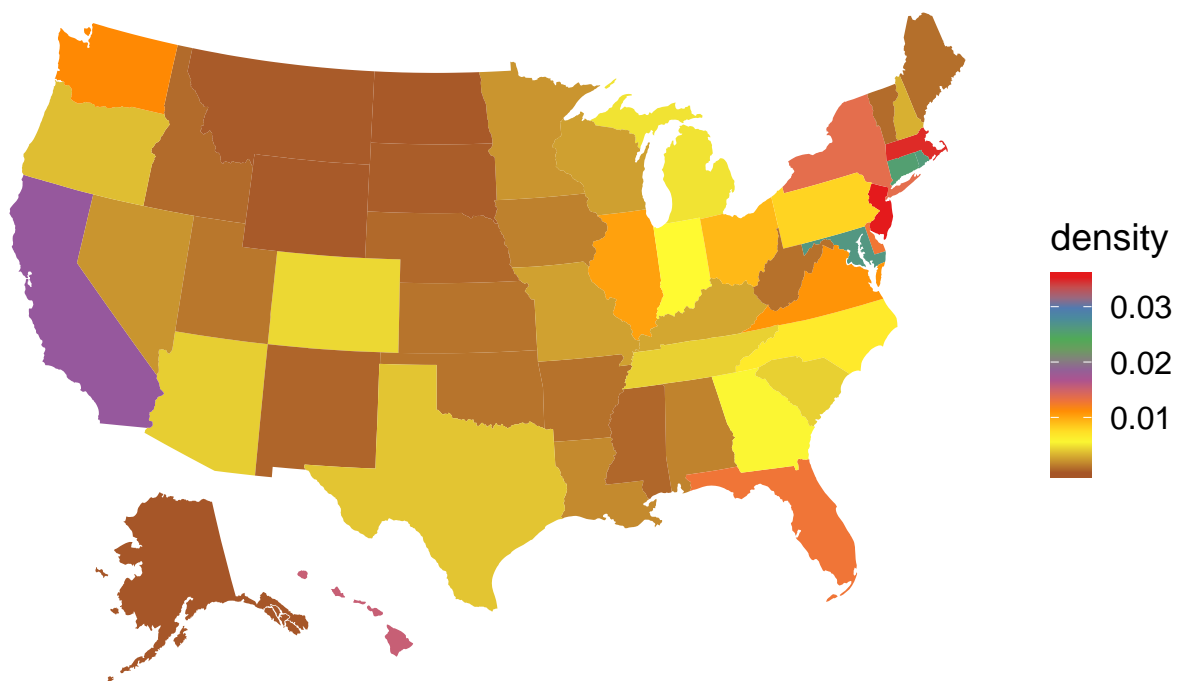
```
DNKN_loc %>%  
  ggplot(mapping = aes(x = x, y = y, group = group, fill = density)) +  
  geom_polygon() +  
  coord_equal() +  
  theme_map() +  
  scale_fill_distiller(palette = "Set1") +  
  labs(title = "Dunkin' Locations") +  
  theme(plot.title = element_text(hjust = 0.5))
```

Dunkin' Locations



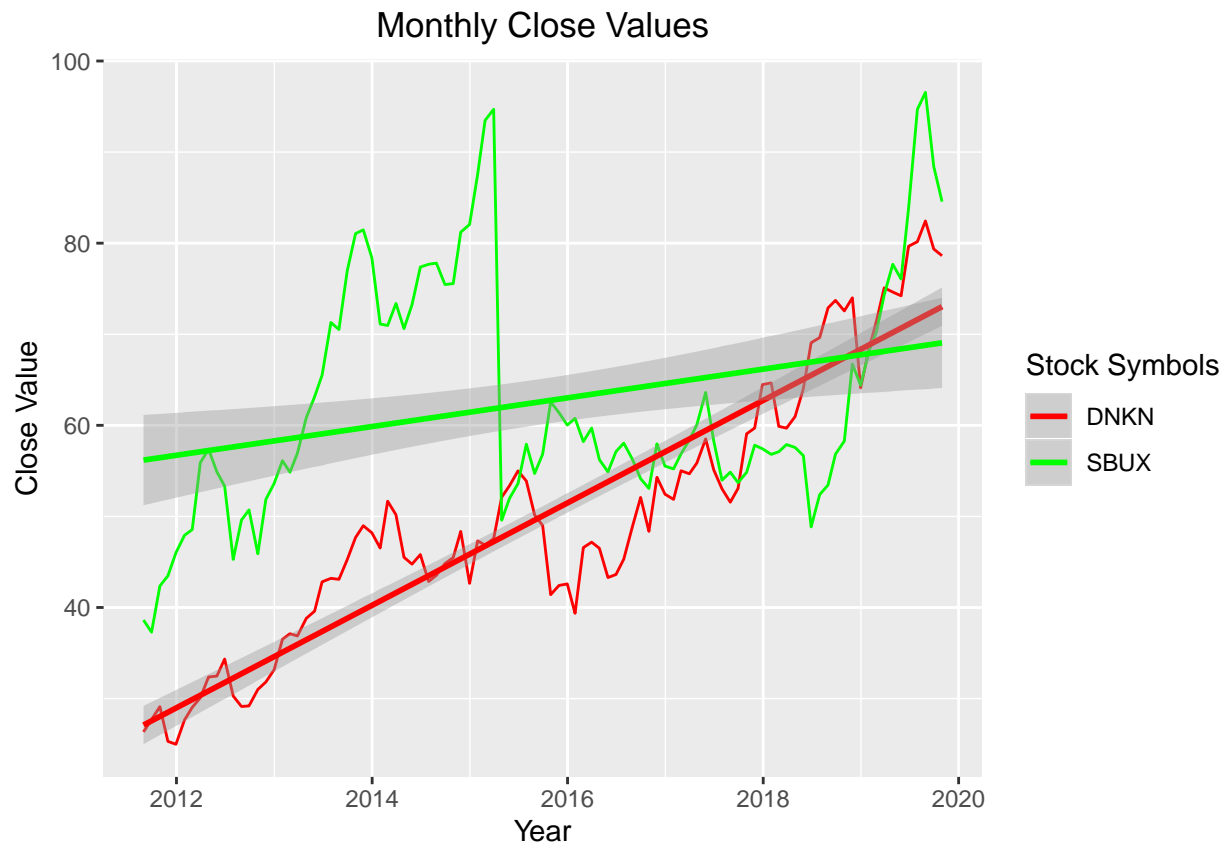
```
SBUX_loc %>%  
  ggplot(mapping = aes(x = x, y = y, group = group, fill = density)) +  
  geom_polygon() +  
  coord_equal() +  
  theme_map() +  
  scale_fill_distiller(palette = "Set1") +  
  labs(title = "Starbucks Locations") +  
  theme(plot.title = element_text(hjust = 0.5))
```


Starbucks Locations



Monthly Stock Close

```
D_S %>%  
  group_by(stock) %>%  
  ggplot() +  
  geom_line(mapping = aes(x = timestamp, y = close, color = stock)) +  
  scale_color_manual(values = c("red", "green")) +  
  geom_smooth(mapping = aes(timestamp, close, color = stock), method = "lm") +  
  labs(title = "Monthly Close Values",  
        x = "Year",  
        y = "Close Value") +  
  guides(color = guide_legend(title = "Stock Symbols")) +  
  theme(plot.title = element_text(hjust = 0.5))
```



Prediction graph

```
sim1_mod <- lm(close ~ timestamp, data = filter(D_S, stock=="DNKN"))
coef(sim1_mod)
```

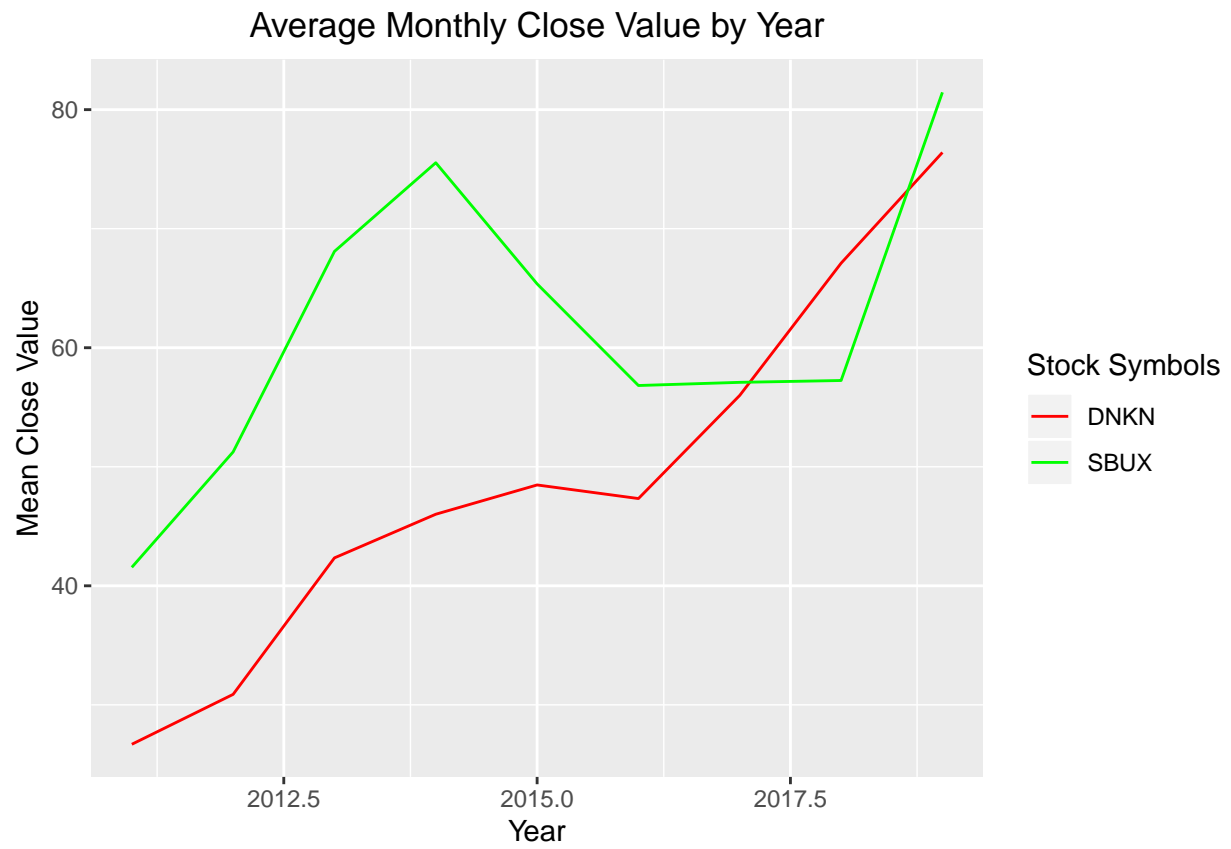
```
## (Intercept)    timestamp
## -207.23469614  0.01539905
```

```
sim1_mod <- lm(close ~ timestamp, data = filter(D_S, stock=="SBUX"))
coef(sim1_mod)
```

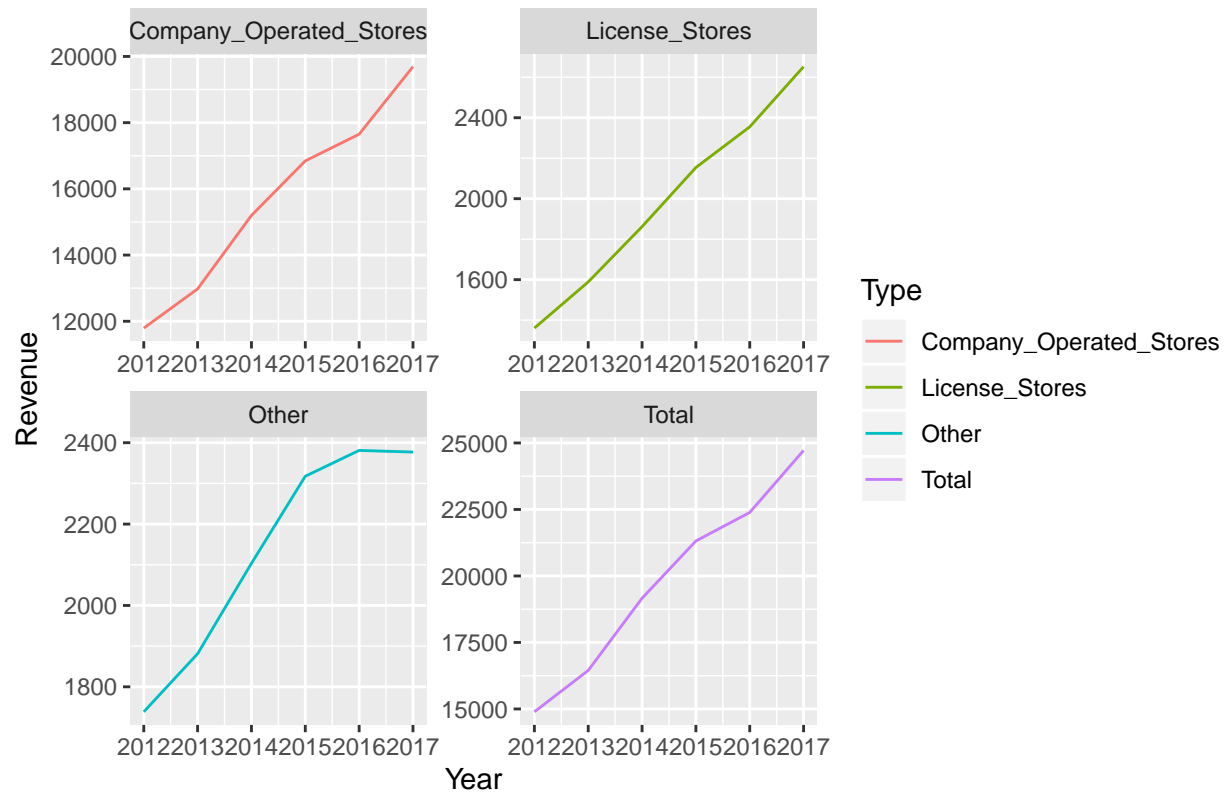
```
## (Intercept)    timestamp
## -9.490193873  0.004315763
```

Yearly Mean Stock Close

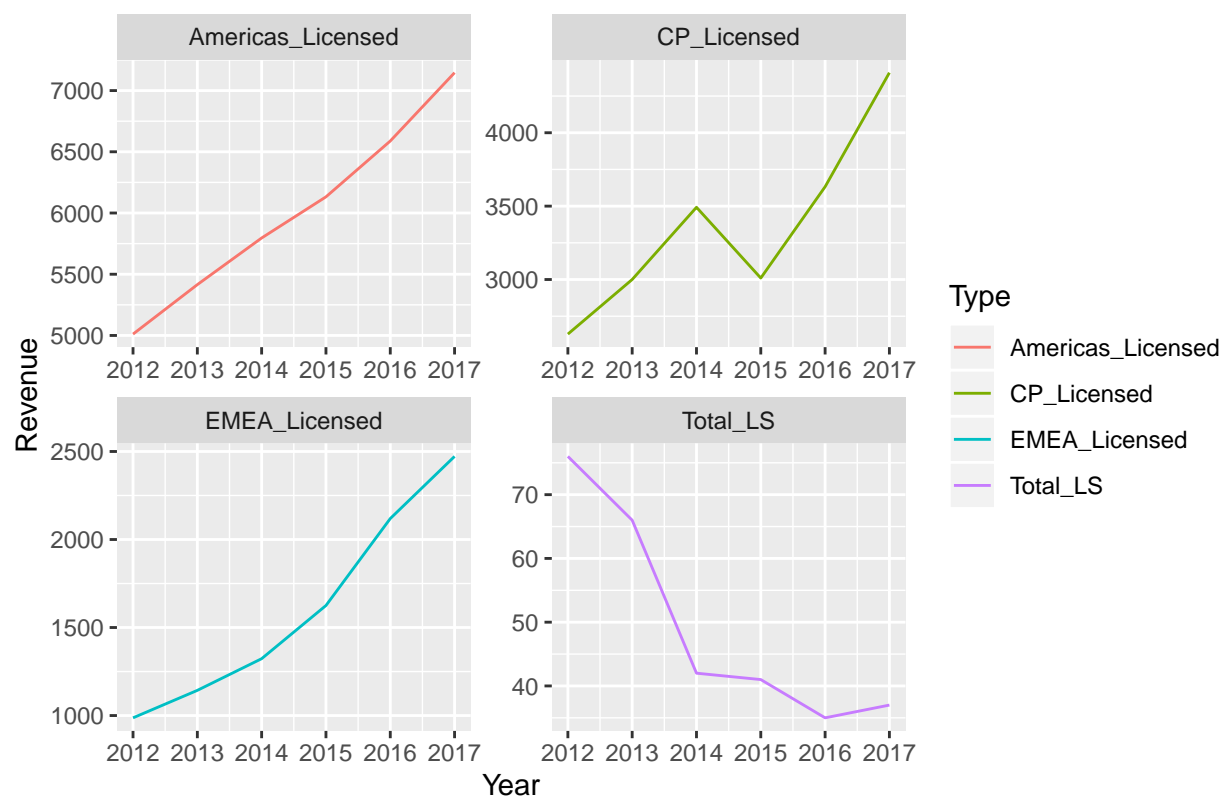
```
yrly %>%
  group_by(stock) %>%
  ggplot() +
  geom_line(mapping = aes(x = year, y = mean_close, color = stock)) +
  scale_color_manual(values = c("red", "green")) +
  labs(title = "Average Monthly Close Value by Year",
       x = "Year",
       y = "Mean Close Value") +
  guides(color = guide_legend(title = "Stock Symbols")) +
  theme(plot.title = element_text(hjust = 0.5))
```



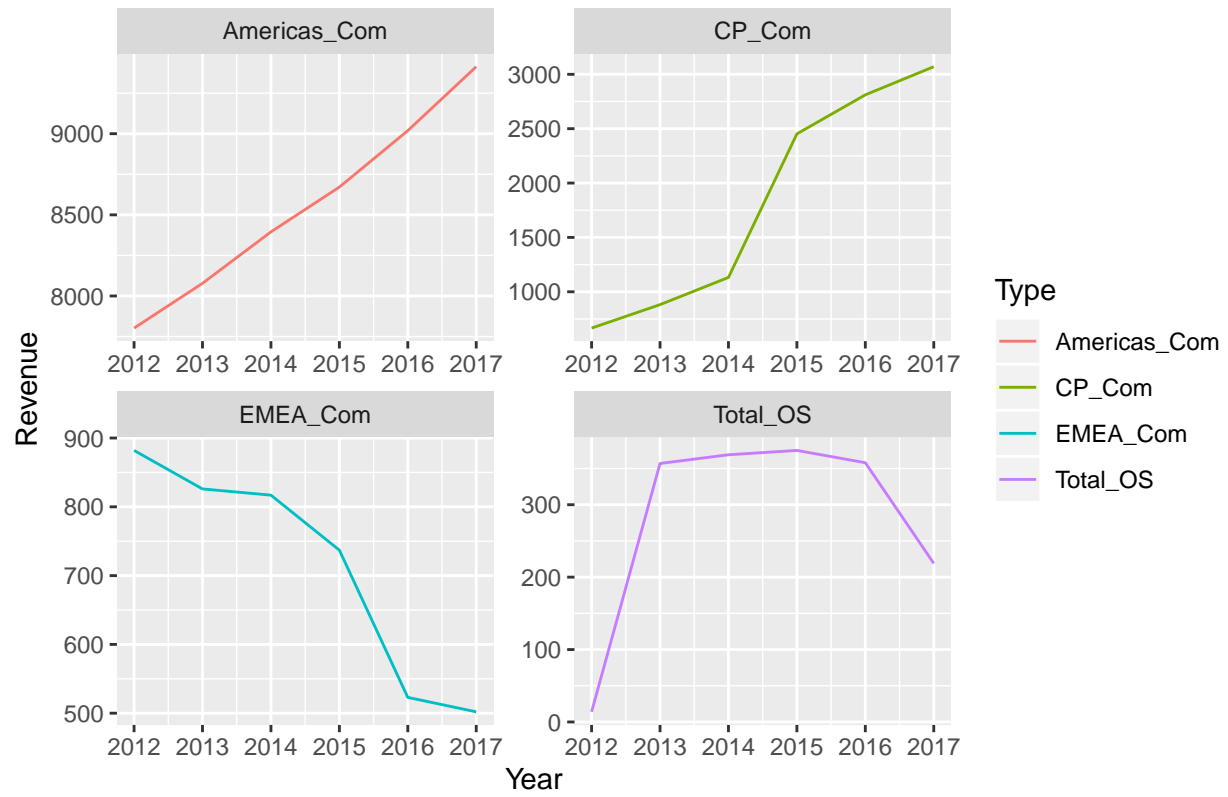
Starbucks's Revenue



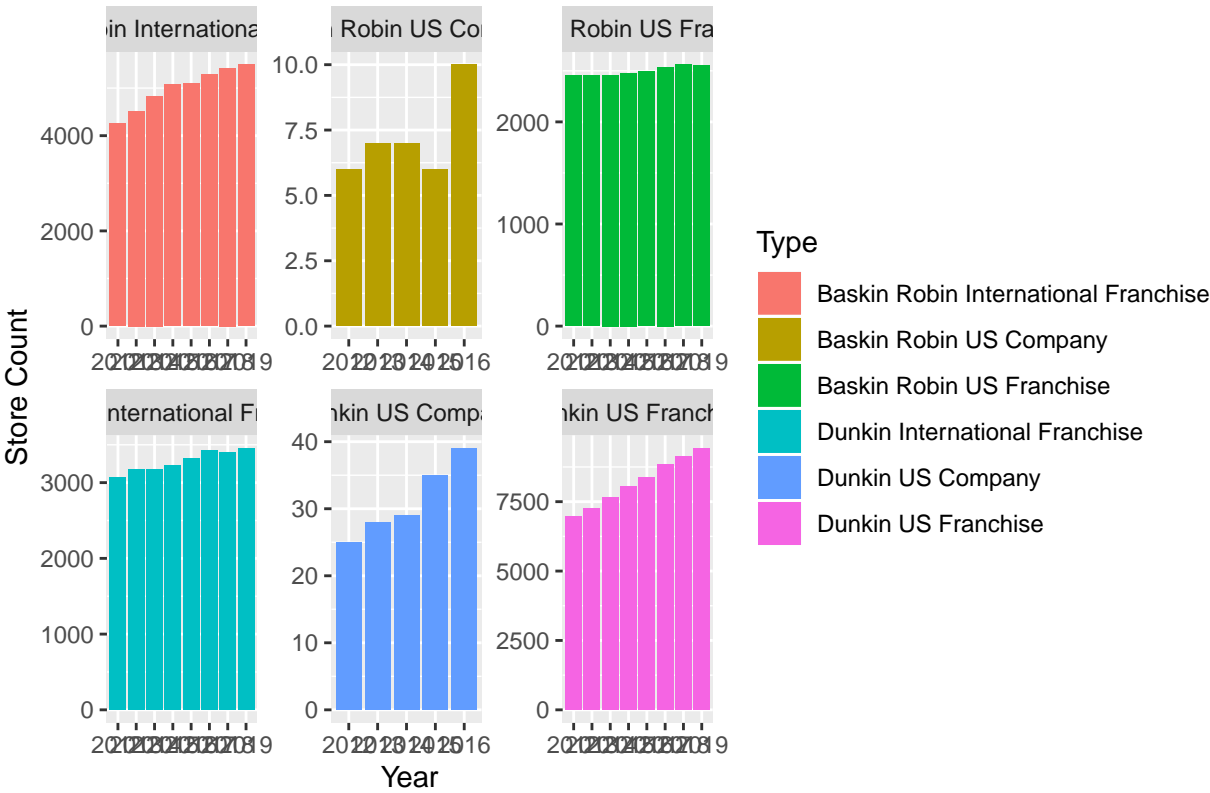
Starbuck's Revenue/Country(LS)



Starbuck's Reveue/Country(OS)



Dunkin Donut's Store Count



Dunkin Donut's Revenue

