

## Week 5 Project Report

**Introduction:** This project looks at the pizza places in five different cities in Texas: Houston, San Antonio, Austin, Dallas and College Station. People who are interested in eating Pizza will be super-excited about this and locals of Texas who travel around will really like this work.

**Data:** Data about the restaurants in the five cities of Texas, namely Houston, San Antonio, Austin, Dallas and College Station from Foursquare. The number of restaurants in each of the city will be exported and then the top 100 restaurants according to the rating will be selected. The following data was abstracted from Foursquare: Name, Address, Latitude, Longitude and rating.

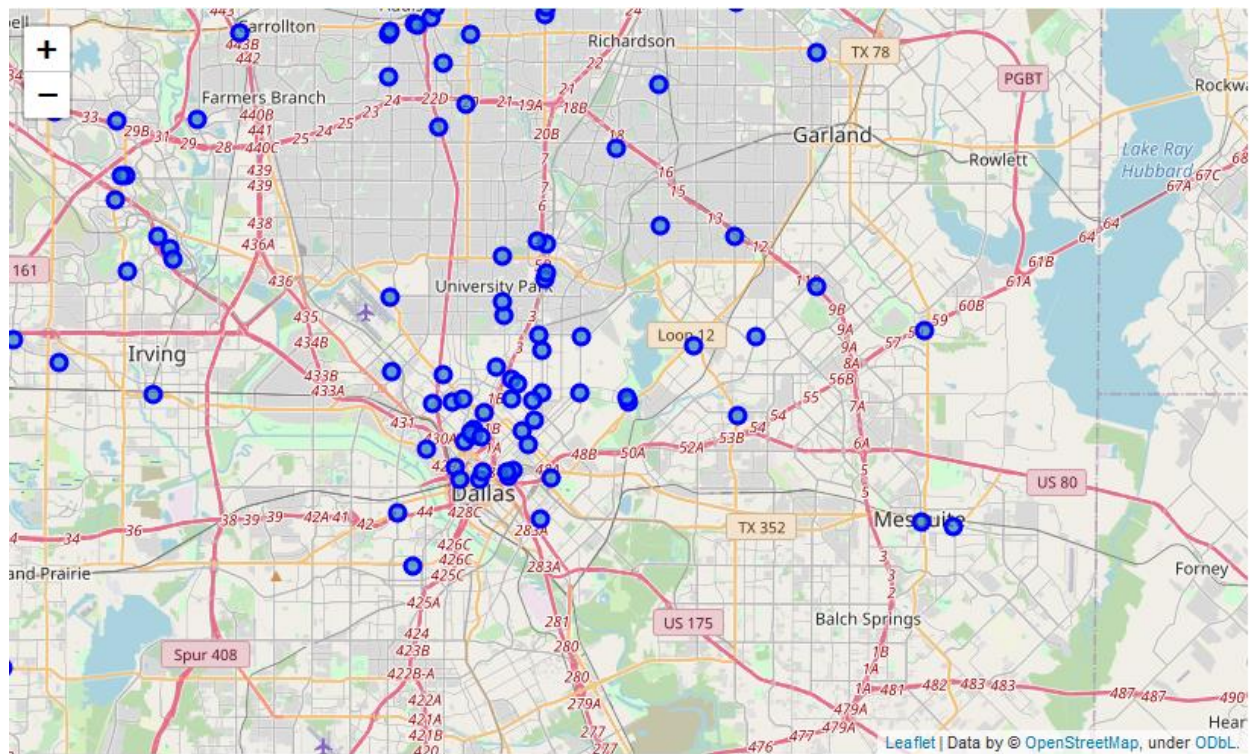
**Methodology:** We collected the information for all the pizza places as mentioned in the previous section, then these ratings were arranged to get the best 100 places according to the rating. Further we did mean distance from mean coordinate analysis to find the location to find what would be the most appropriate place to have a hotel so that mean distance to all the pizza places is minimum.

### Results:

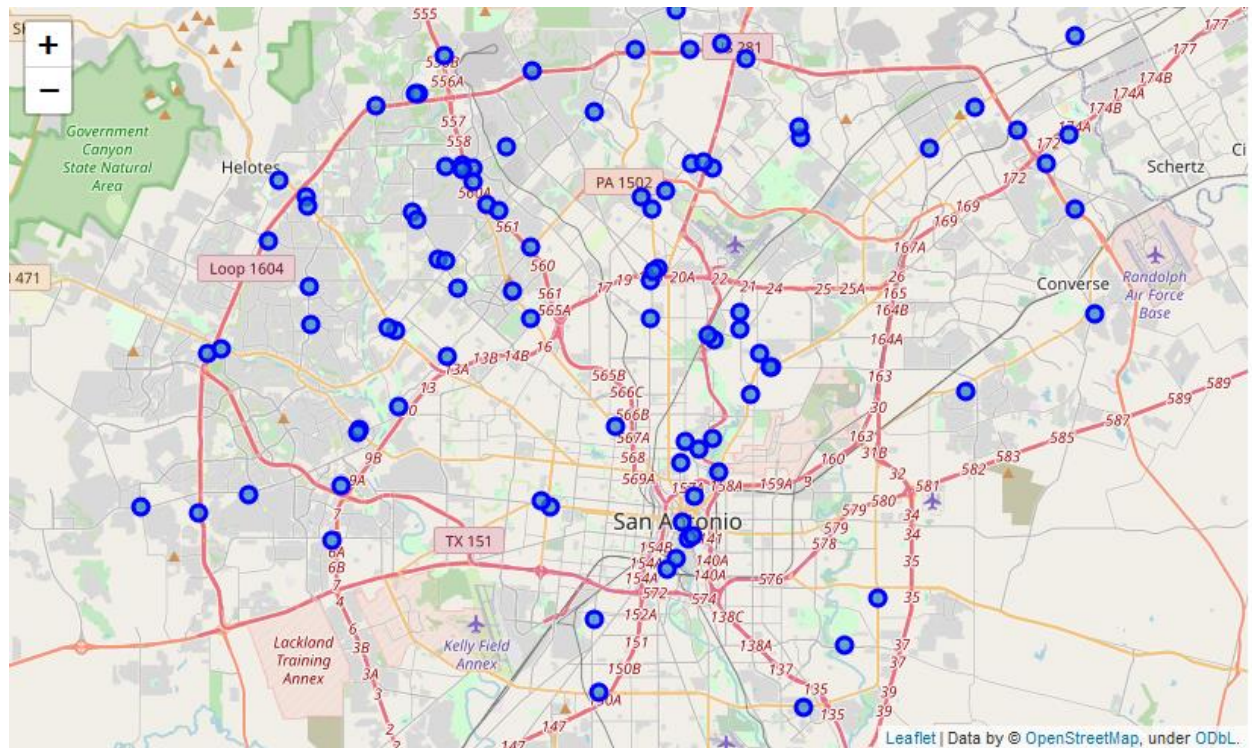
We see the following results

```
Total number of pizza places in Dallas, TX = 188
Showing Top 100
Total number of pizza places in San Antonio, TX = 170
Showing Top 100
Total number of pizza places in Austin, TX = 168
Showing Top 100
Total number of pizza places in Houston, TX = 198
Showing Top 100
Total number of pizza places in College Station, TX = 64
Showing Top 100
```

## Pizza places in Dallas

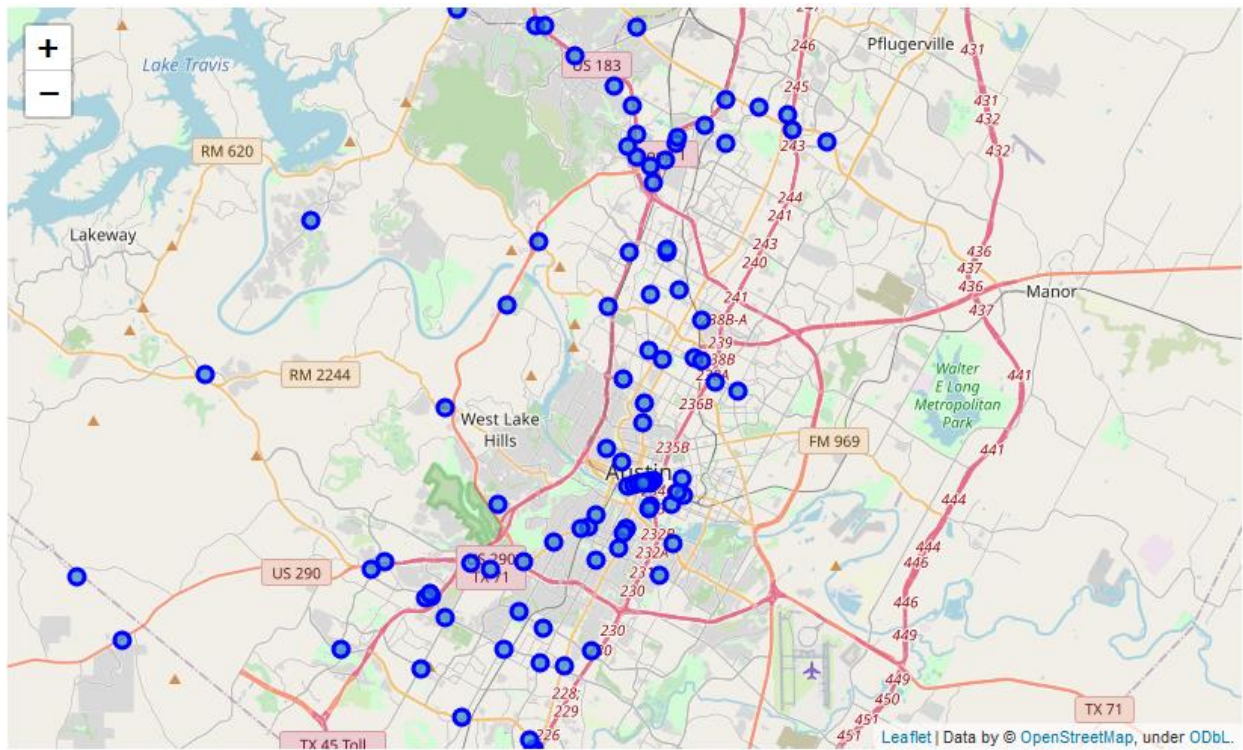


## Pizza places in San Antonio

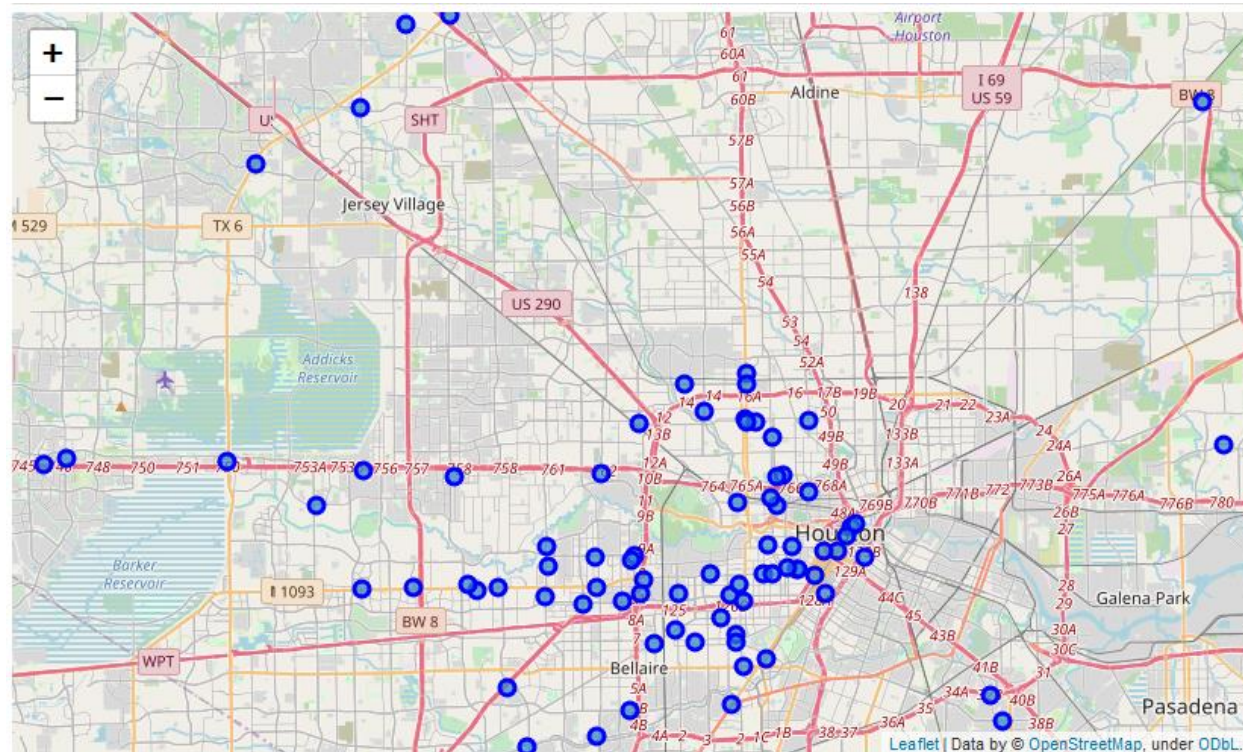




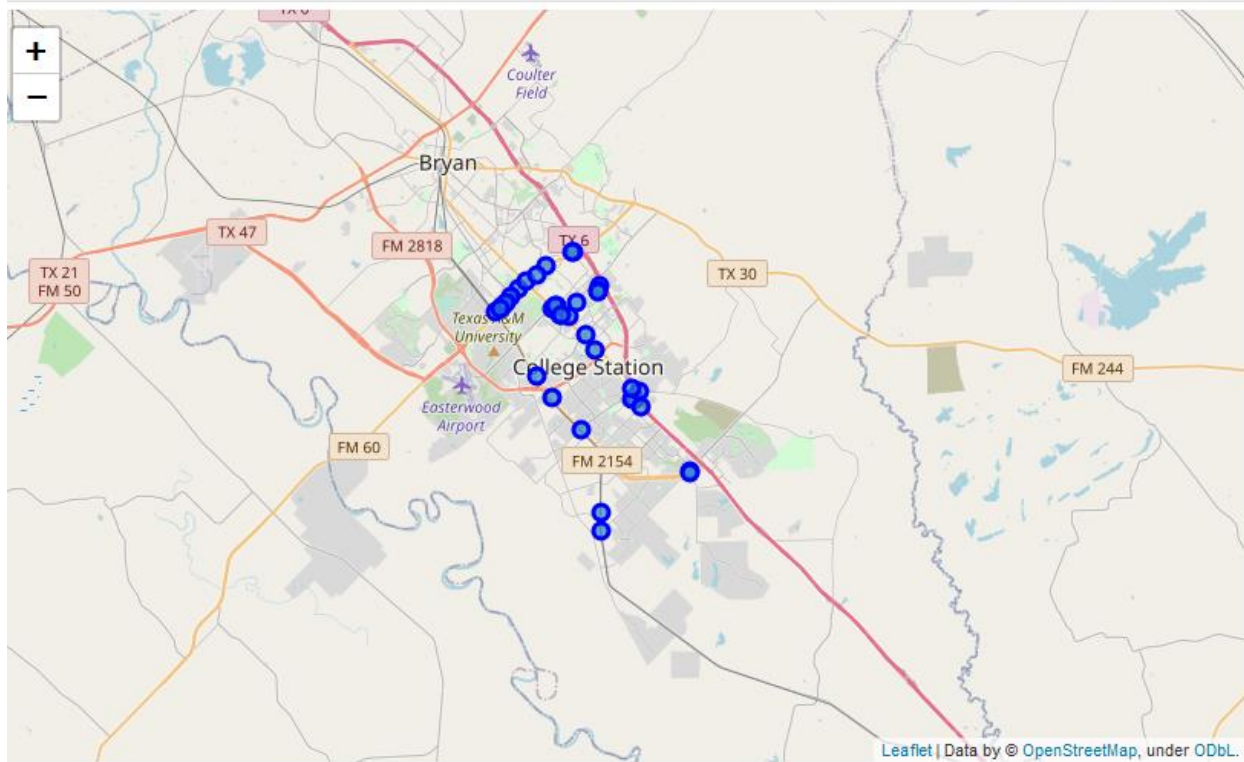
## Pizza places in Austin



## Pizza places in Houston



## Pizza places in College Station



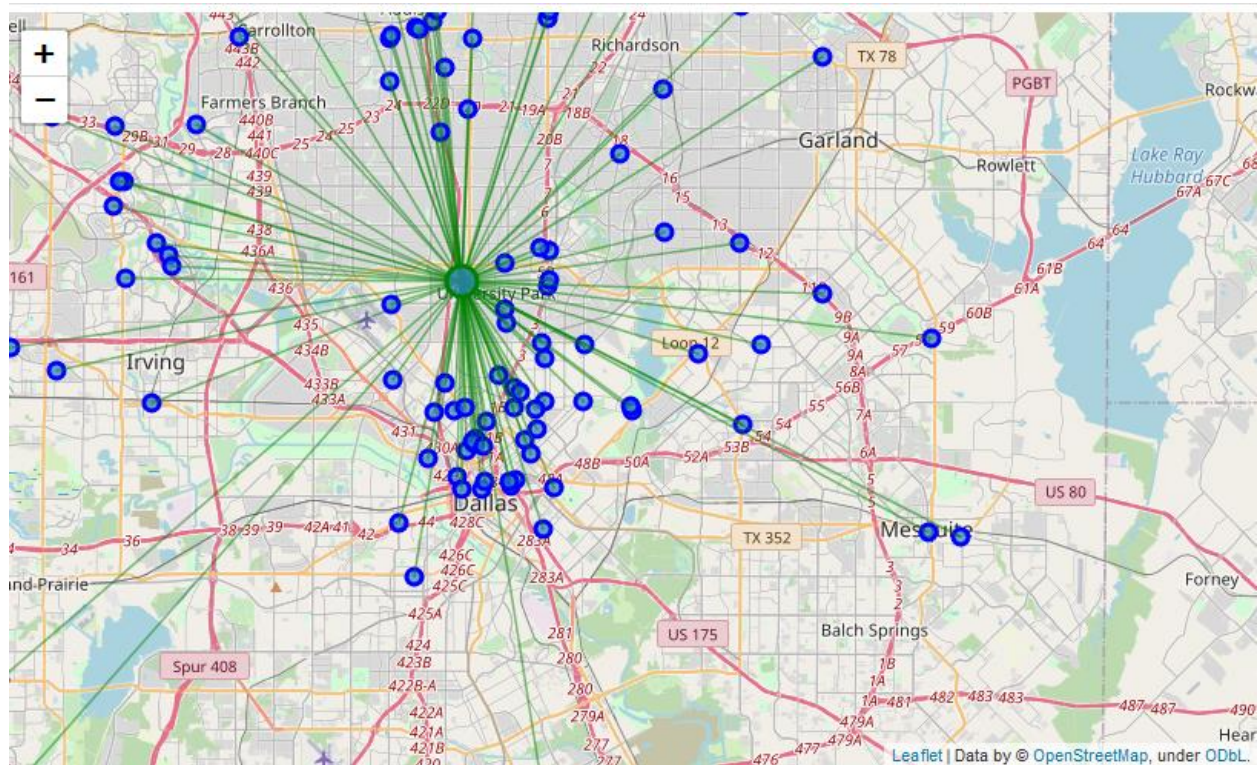
Next we find the the mean location of the pizza places in every city.

# Best place to find a hotel if you like Pizza



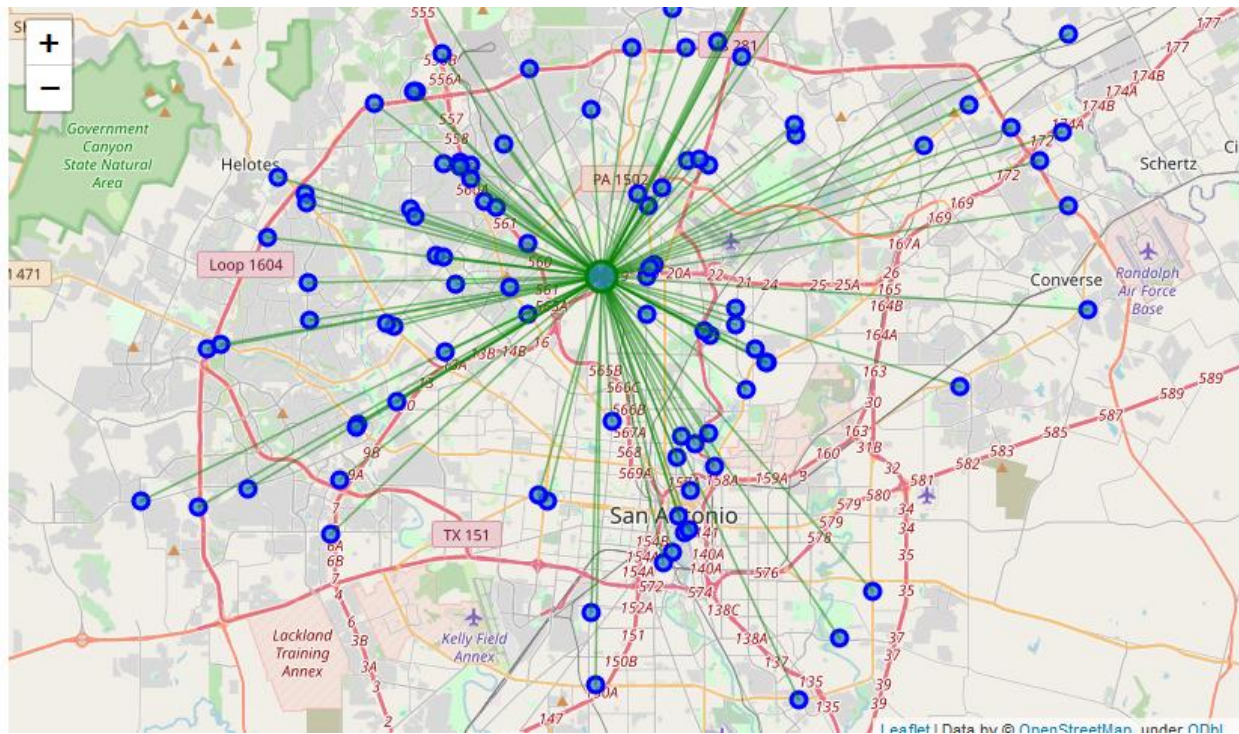
Dallas, TX  
Mean Distance from Mean coordinates  
0.10358934209164257  
San Antonio, TX  
Mean Distance from Mean coordinates  
0.11006413355250629  
Austin, TX  
Mean Distance from Mean coordinates  
0.09089413770247289  
Houston, TX  
Mean Distance from Mean coordinates  
0.1295251710173956  
College Station, TX  
Mean Distance from Mean coordinates  
0.030806298016328514

**Mean coordinates marked as Green Spot for Dallas**

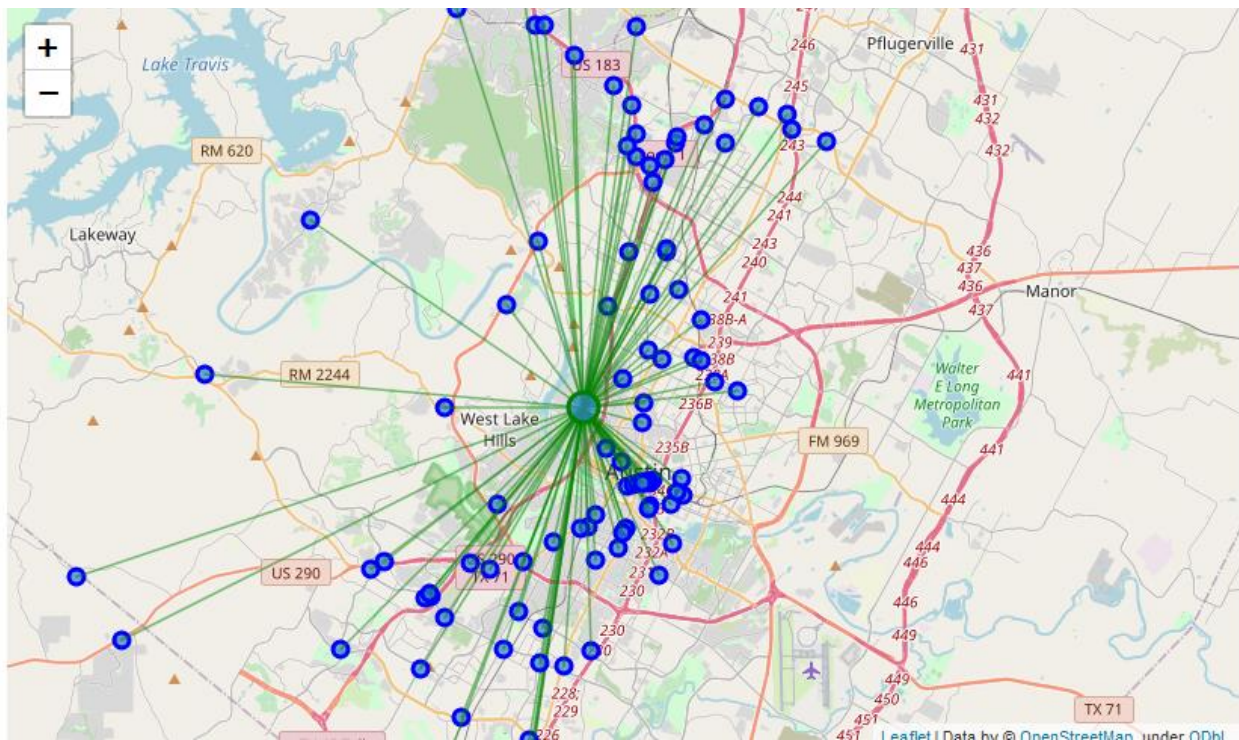




## Mean coordinates marked as Green Spot for San Antonio

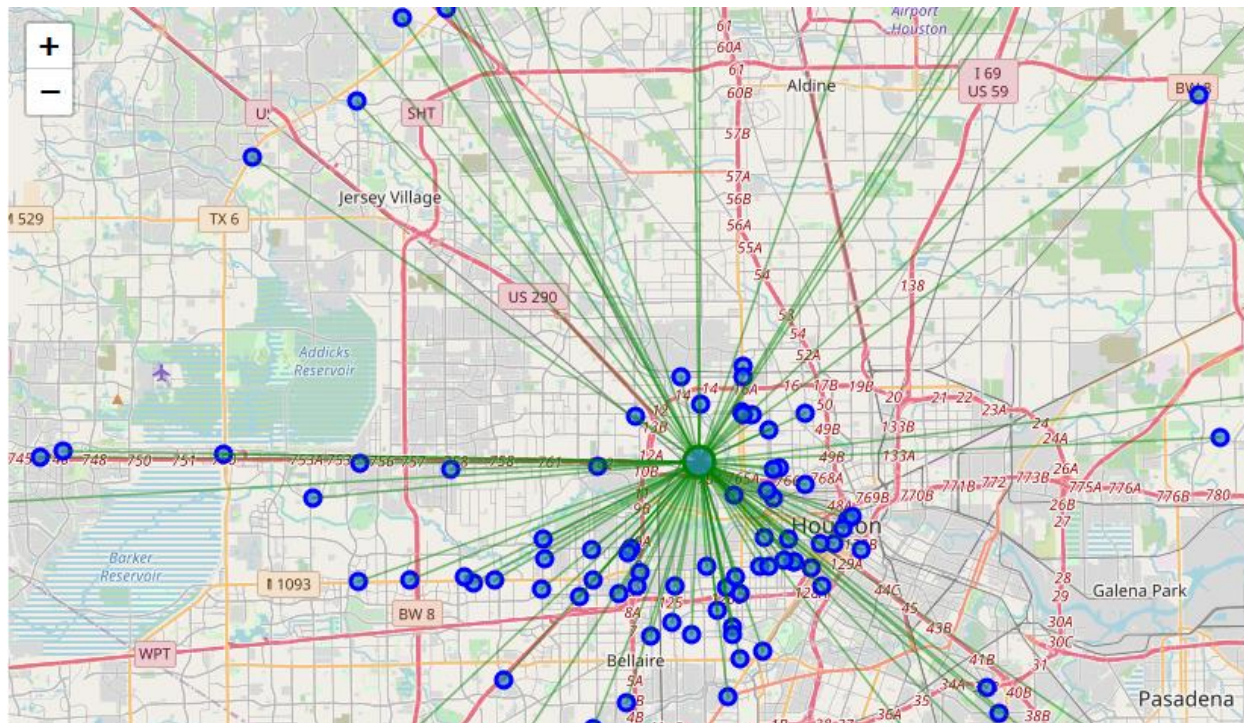


## Mean coordinates marked as Green Spot for Austin

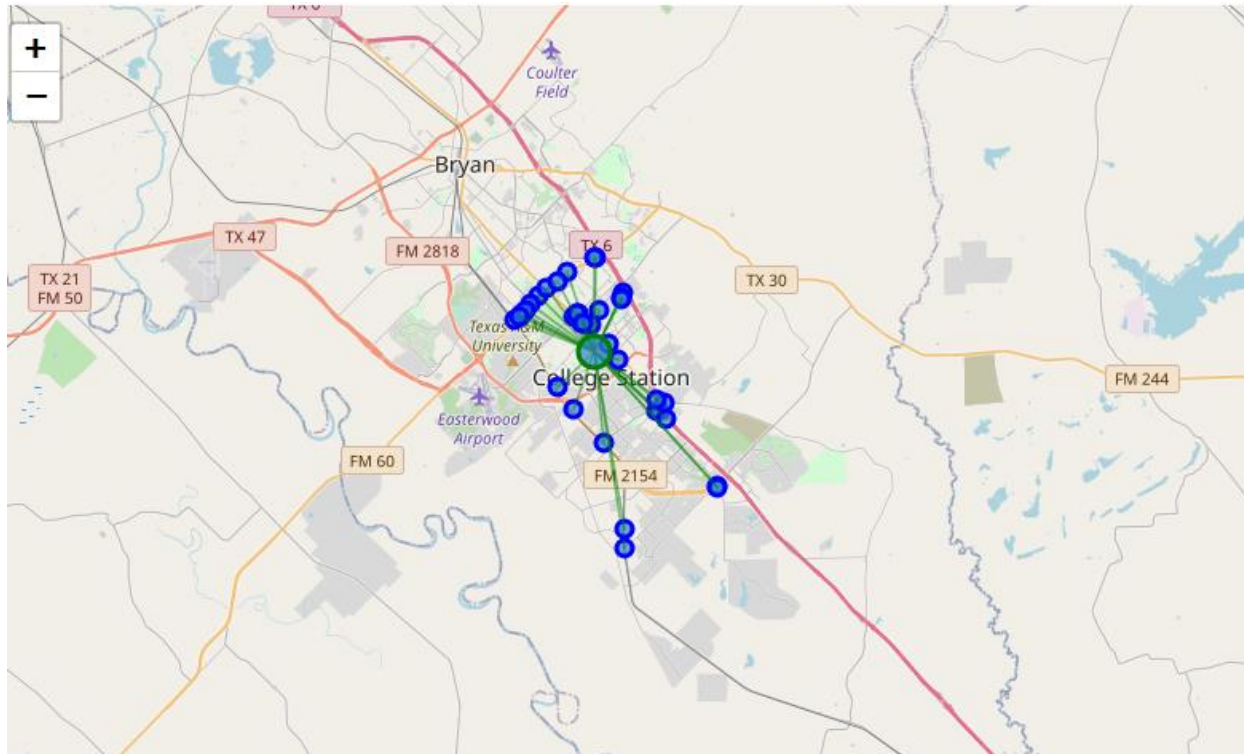




**Mean coordinates marked as Green Spot for Houston**



**Mean coordinates marked as Green Spot for College Station**



**Discussion:** It can be seen in the first five figures that the best pizza places are distributed through the five cities that we examined. Houston has the most number of pizza places whereas College Station has the lowest number of pizza places. We can also understand how much the pizza places are spread in each city. Houston has a wide spread of the top places, whereas the pizza places in College Station are concentrated in only one part of the town. Dallas and San Antonio on the other hand are much more evenly spread. This can also be inferred from the calculations of mean distance from mean coordinate. Houston had the highest number value for mean distance from mean coordinate, whereas College Station has the smallest. This value is also small for Austin as the city is laid out on a longer strip.

**Conclusion:** We used the Foursquare data to analyze the number of pizza places in Texas, in five cities, namely Austin, Houston, San Antonio, Dallas and College Station. We see that Houston had the greatest number of pizza places and the most spread out top 100 pizza places as well. The least number of pizza places as well as least spread out according to mean distance from mean coordinates.