Find Halal Food at different location

HALAL
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Introduction where you discuss the business problem and who would be interested in this project.

If someone will immigrate to USA and he need to be near from restaurant provide Halal food since he is Muslim , so the problem how to choose location have a lot of Halal restaurant

- DATA WHERE YOU DESCRIBE THE DATA THAT WILL BE USED TO SOLVE THE PROBLEM AND THE SOURCE OF THE DATA.

I will use the FourSquare API to collect data about locations of Halal Restaurant in 5 major US cities which are: New York,NY, San Francisco, CA, Jersey City, NJ, Boston, MA and Chicago,IL. These are one of the most populated US.

Halal Restaurant
52e81612bcbc57f1066b79ff

Methodology

My main target here is to asses which city would have the highest Halal Restaurant density. I used the Four Square API through the venues channel. I used the near query to get venues in the cities. Also, I use the CategoryID to set it to show only Halal Restaurant Places.

That **52e81612bcbc57f1066b79ff** is the Id of the Halal Restaurant Place Category. Also, Foursquare limits us to maximum of 100 venues per query.

Halal Restaurant
52e81612bcbc57f1066b79ff

Methodology

I repeated this request for the 5 studied cities and got their top 100 venues. I saved the name and coordinate data only from the result and plotted them on the map for visual inspection.

Next, to get an indicator of the density of Halal Restaurant Places, I calculated a center coordinate of the venues to get the mean longitude and latitude values. Then I calculated the mean of the Euclidean distance from each venue to the mean coordinates. That was my indicator; mean distance to the mean coordinate.

RESULTS

For our initial visual inspection we see that they all have multiple Halal Restaurant places and often more than Foursquare would like to supply us. The following here are the pictures of the geoplot generated with folium:

```
Total number of Halal places in New York, NY =  169
Showing Top 100
Total number of Halal places in Chicago, IL =  35
Showing Top 100
Total number of Halal places in San Francisco, CA =  25
Showing Top 100
Total number of Halal places in Jersey City, NJ =  142
Showing Top 100
Total number of Halal places in Boston, MA =  11
Showing Top 100
```

RESULTS
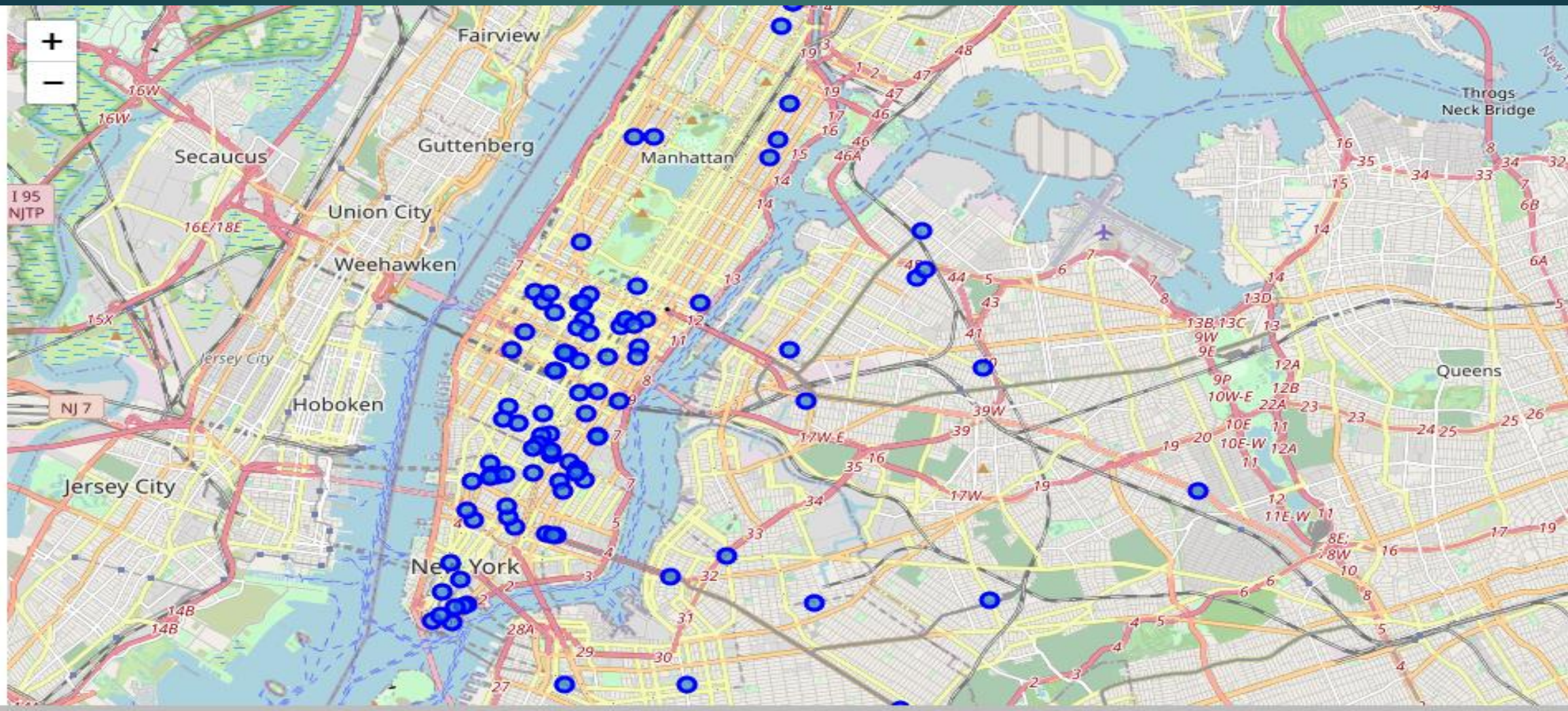
Results

Chicago
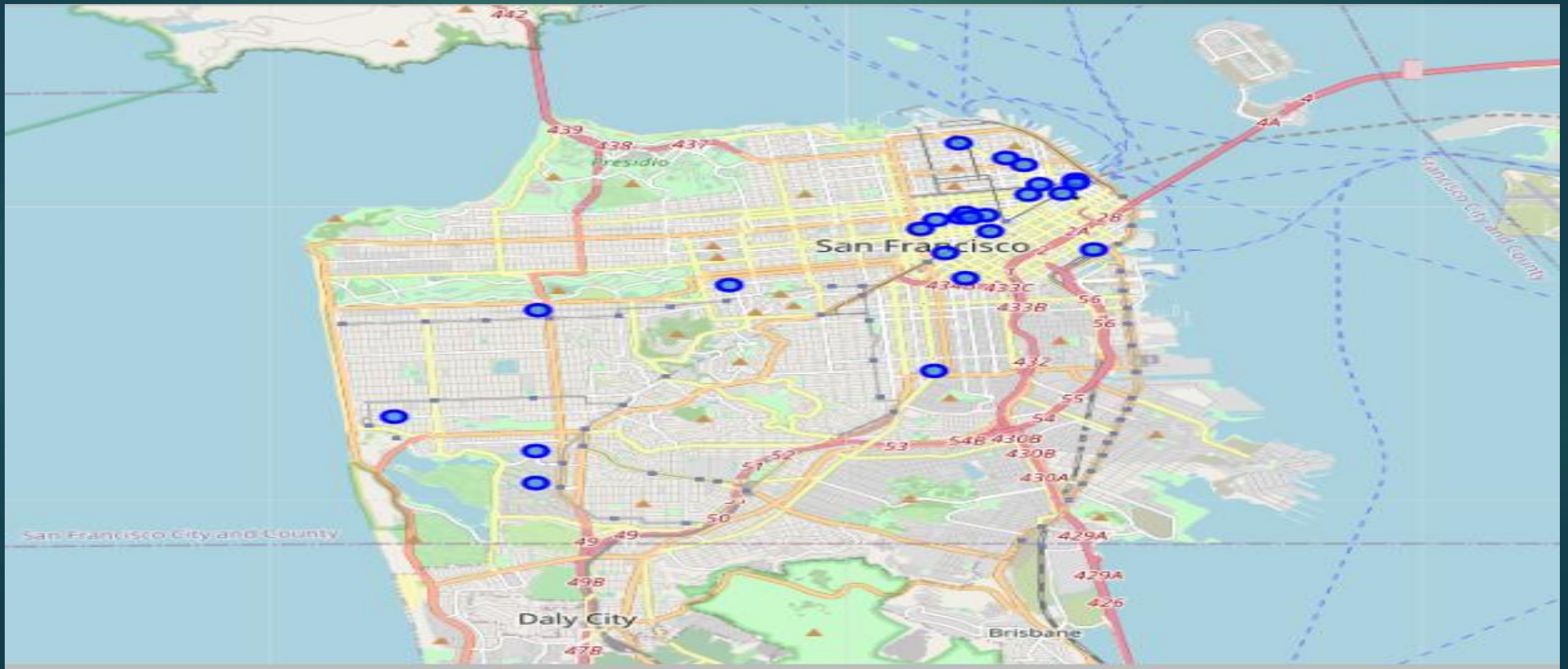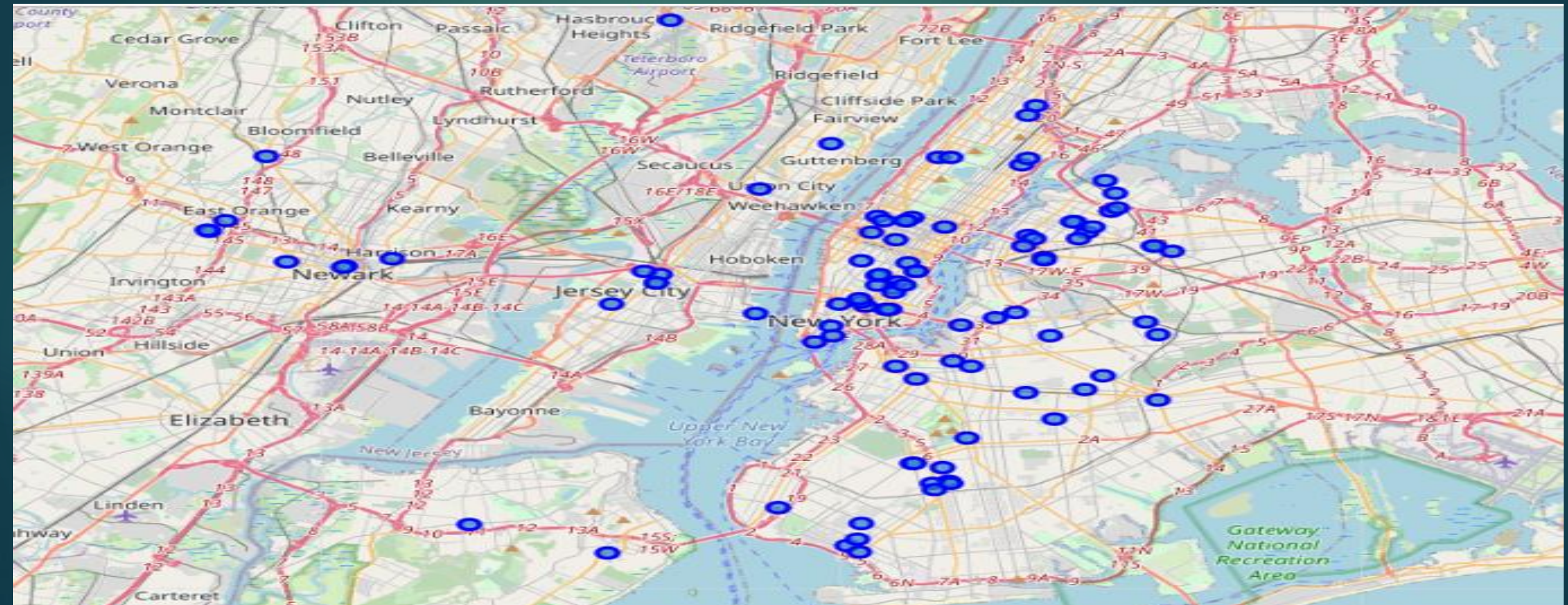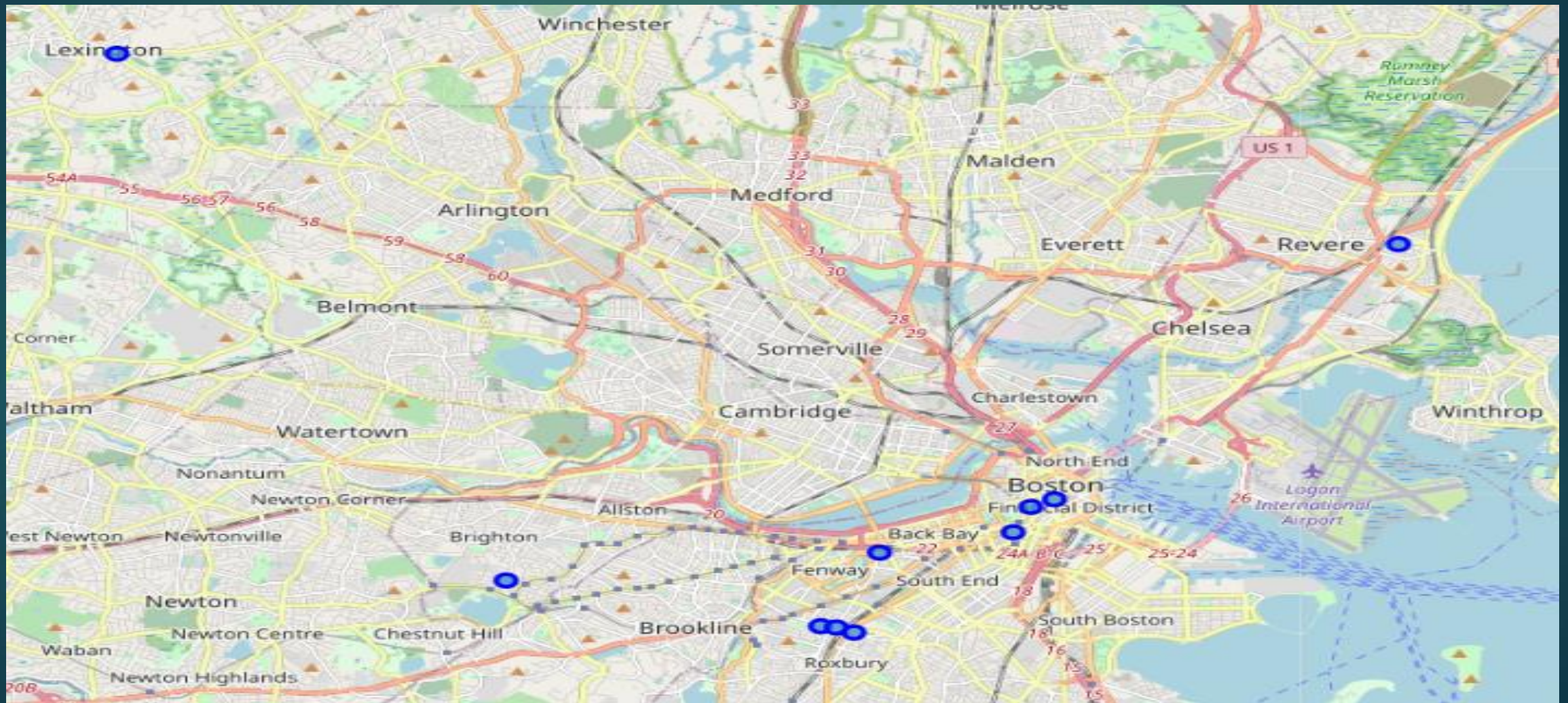
RESULTS

San Francisco

RESULTS
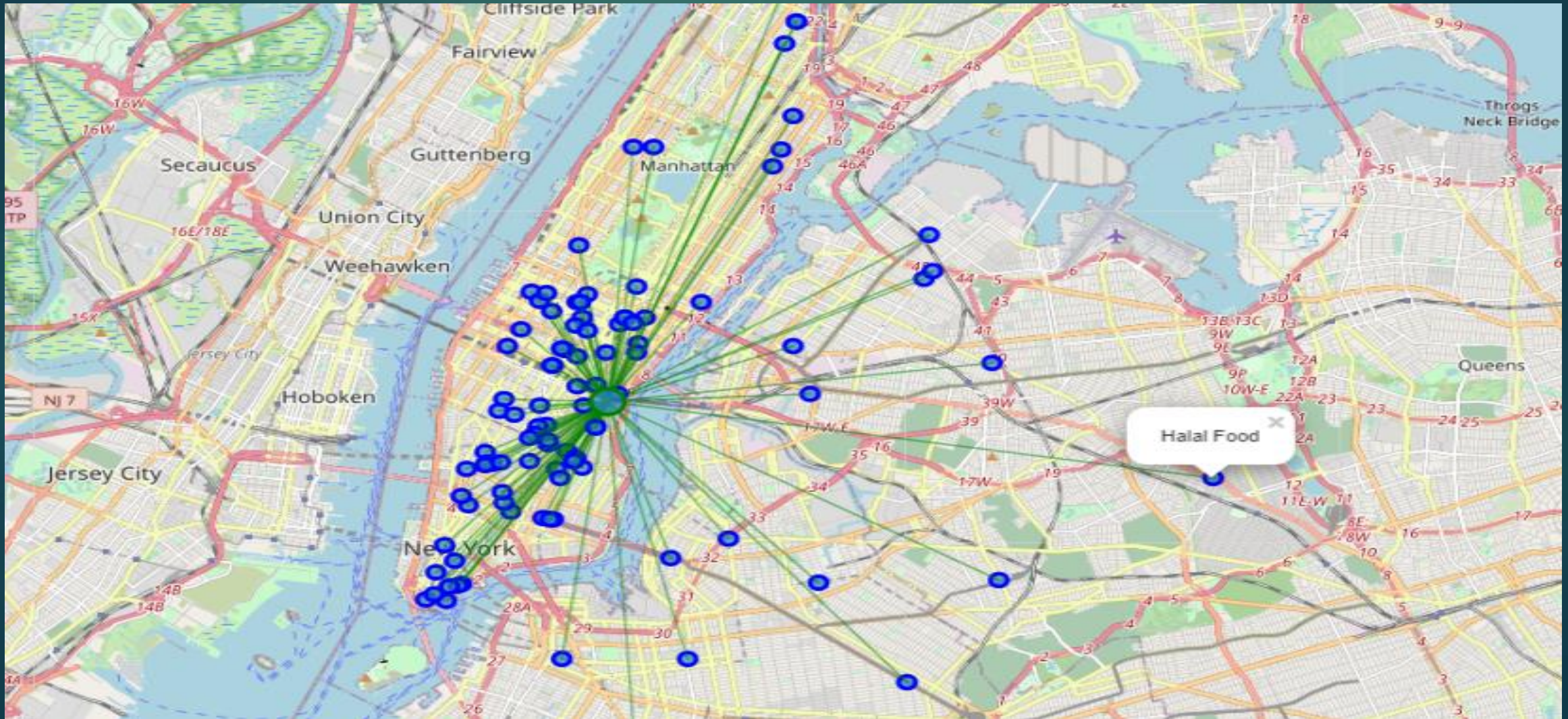
Jersey City

RESULTS

Boston

RESULTS

Based on First inspection we see that New York and Jersey City are the most densely cities. In the next phase we Calculate the Mean coordinate and the mean distance to mean coordinate(MDMC). We represent the mean coordinate with a big green circle and distances with green lines

```
New York, NY
Mean Distance from Mean coordinates
0.03339380578040327
Chicago, IL
Mean Distance from Mean coordinates
0.0618301644158032
San Francisco, CA
Mean Distance from Mean coordinates
0.04123814458600138
Jersey City, NJ
Mean Distance from Mean coordinates
0.07568024521685687
Boston, MA
Mean Distance from Mean coordinates
0.0687405989866332
```
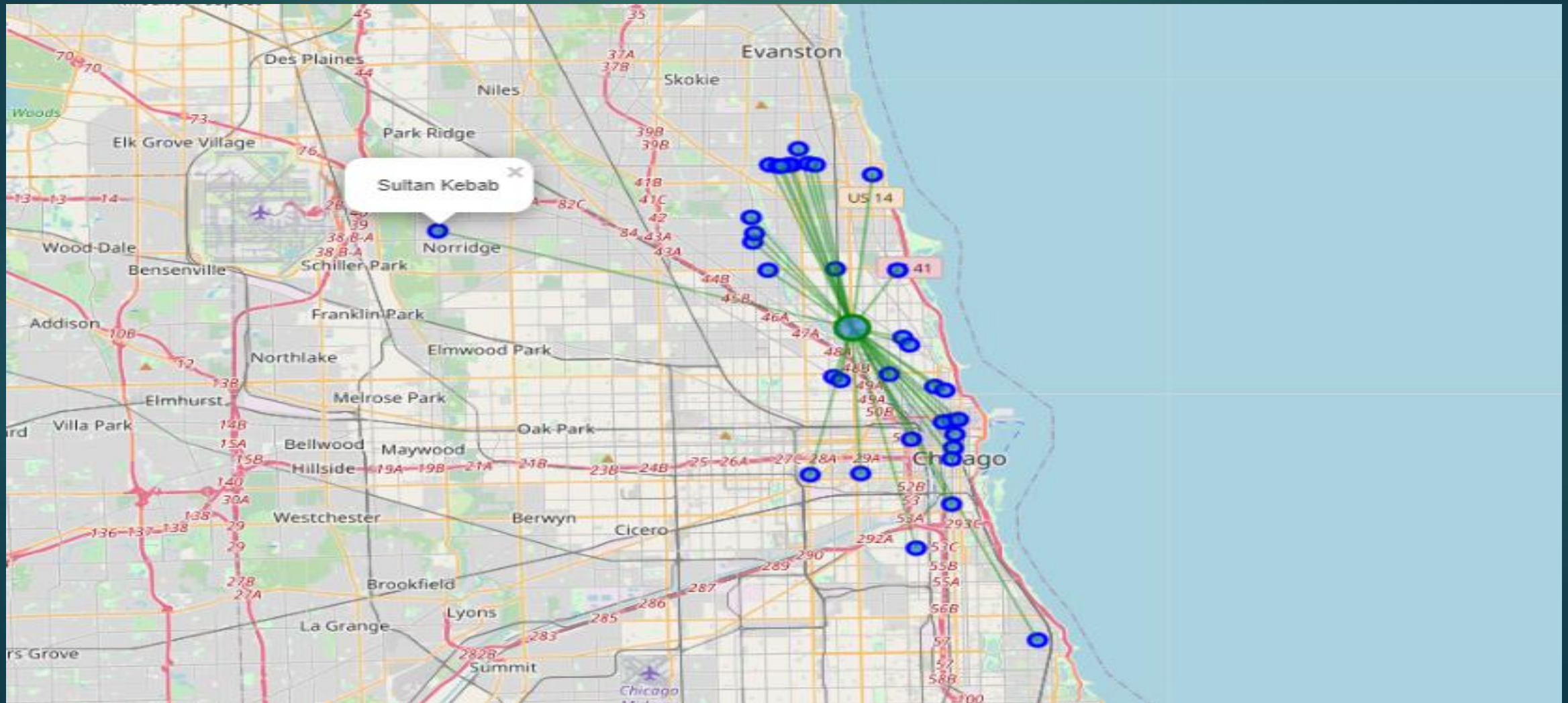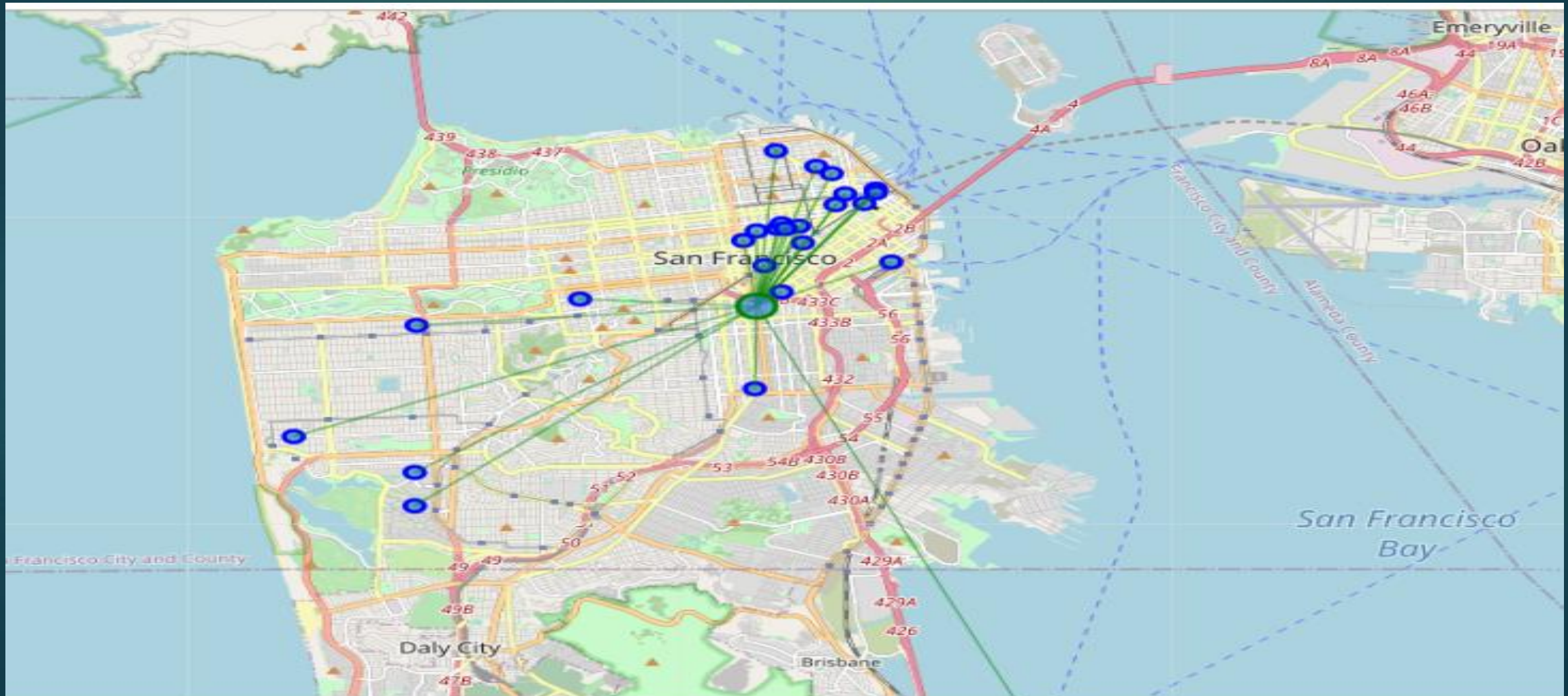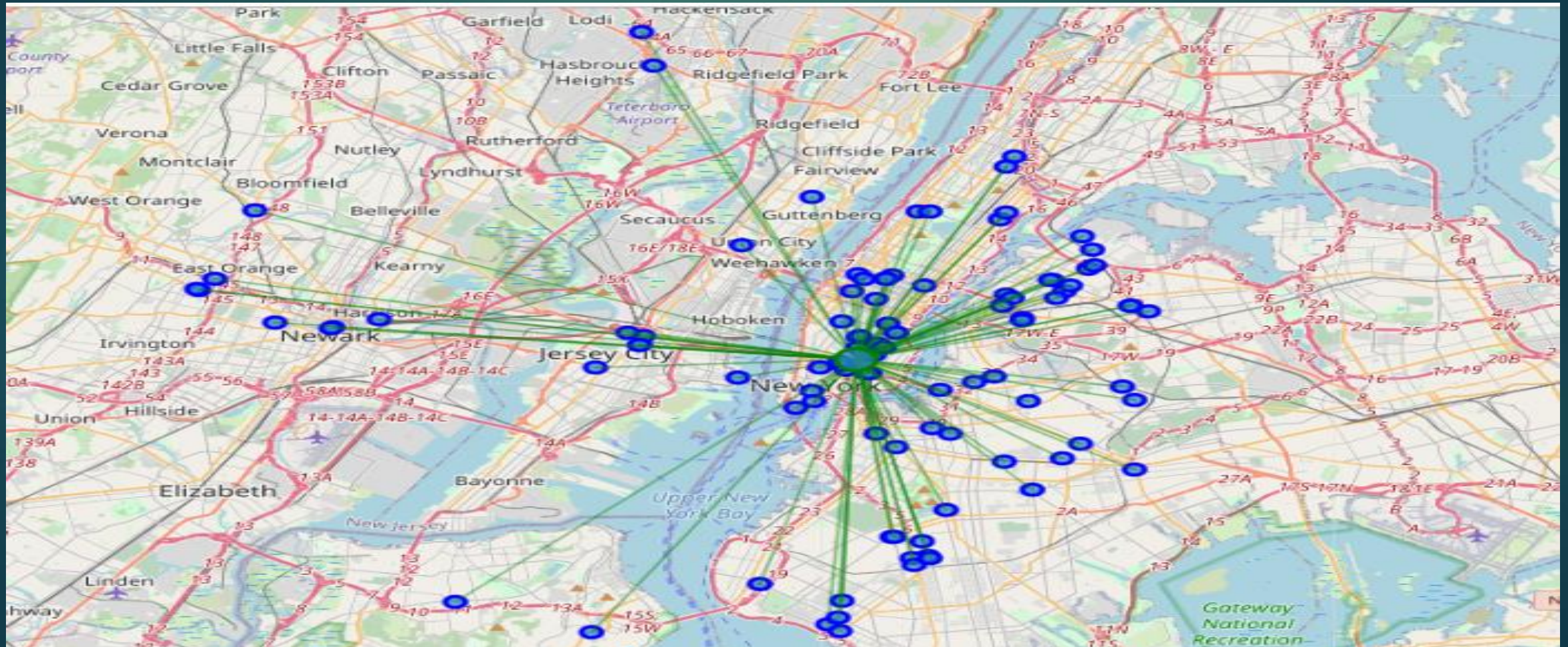
RESULTS

New York
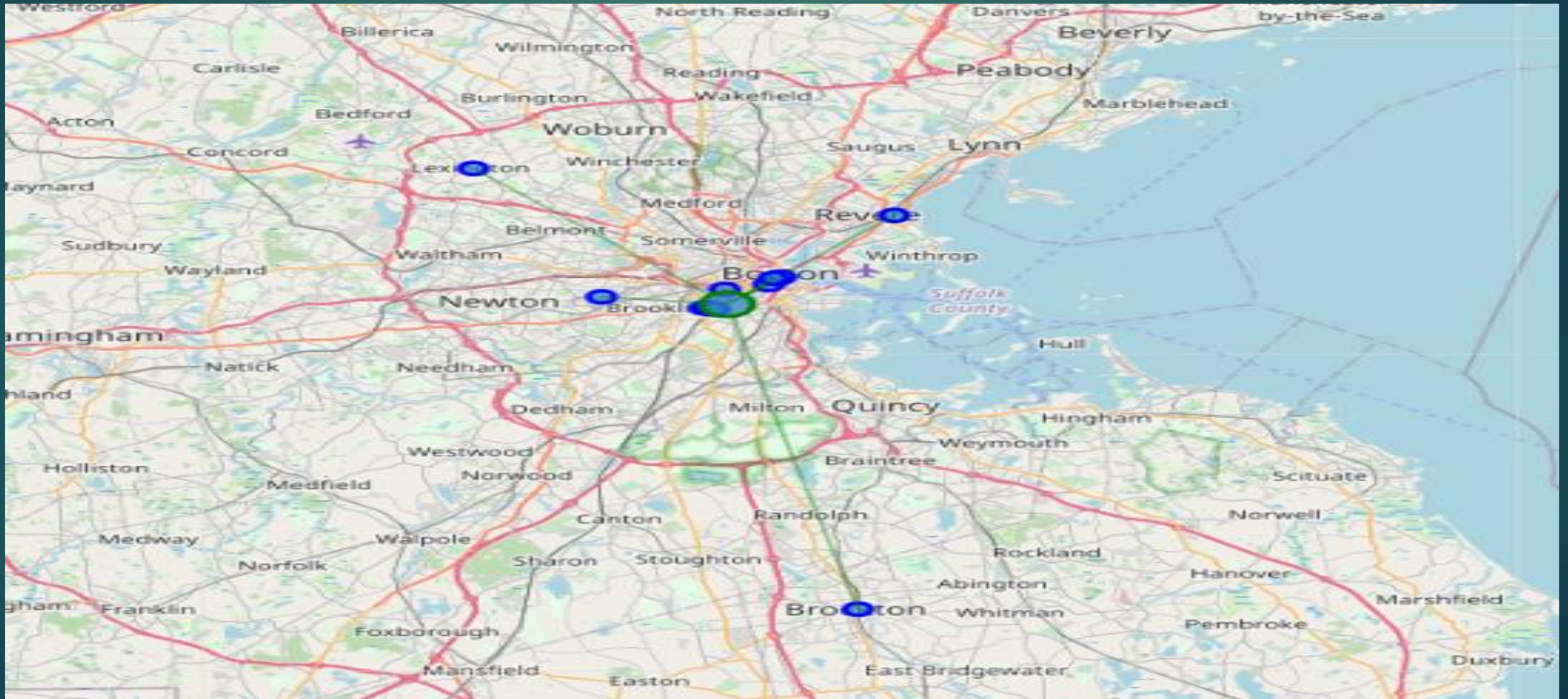
RESULTS

Chicago

San Francisco

RESULTS

Jersey City

RESULTS

Boston

Discussion

I Notice that based on the number of Hala Restaurant at the five cities that the competition will be between New York City and Jercy city and as per what we see New York will be better **Since** MDMC is the best value

Conclusion

It is clear as crystal now that NEW YORK is the best location for Muslim people how try t travel to USA