

A NEW PIZZA PLACE IN NYC

An analysis of suitable neighborhoods where to open a new pizza place in
New York City

The problem

New York is very famous for its pizza that is being sold in every corner of the city.

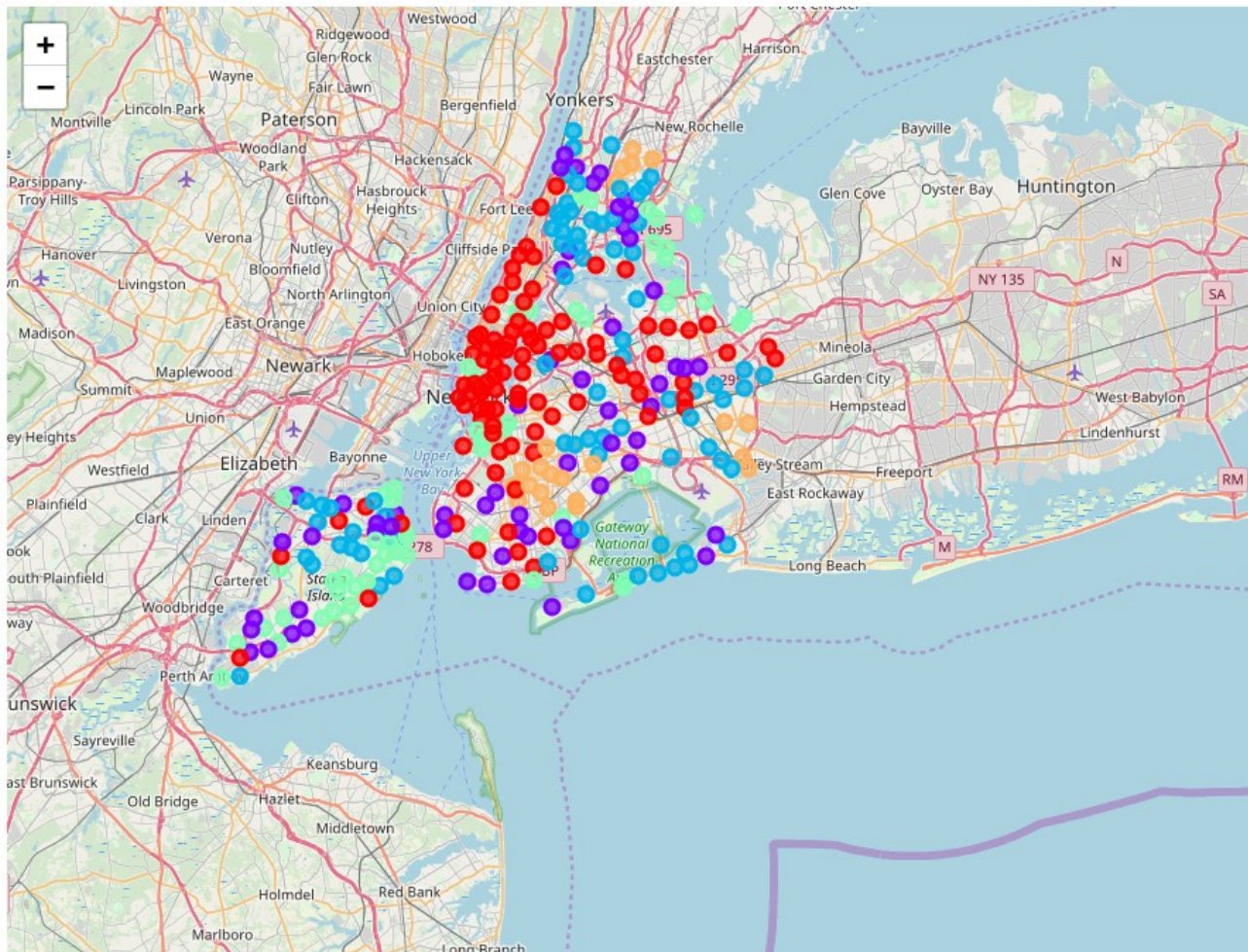
- **Is there room for a new pizza place?**
- **Where?**

How to tackle the problem

- **Retrieve geographical data of NYC**
- **Use the Foursquare API to retrieve food venues in each neighborhood**
- **Cluster neighborhoods based on the type and frequency of food venues, using the K-Means method**
- **Determine if in any cluster there are neighborhoods where pizza places are underrepresented, using box plots**

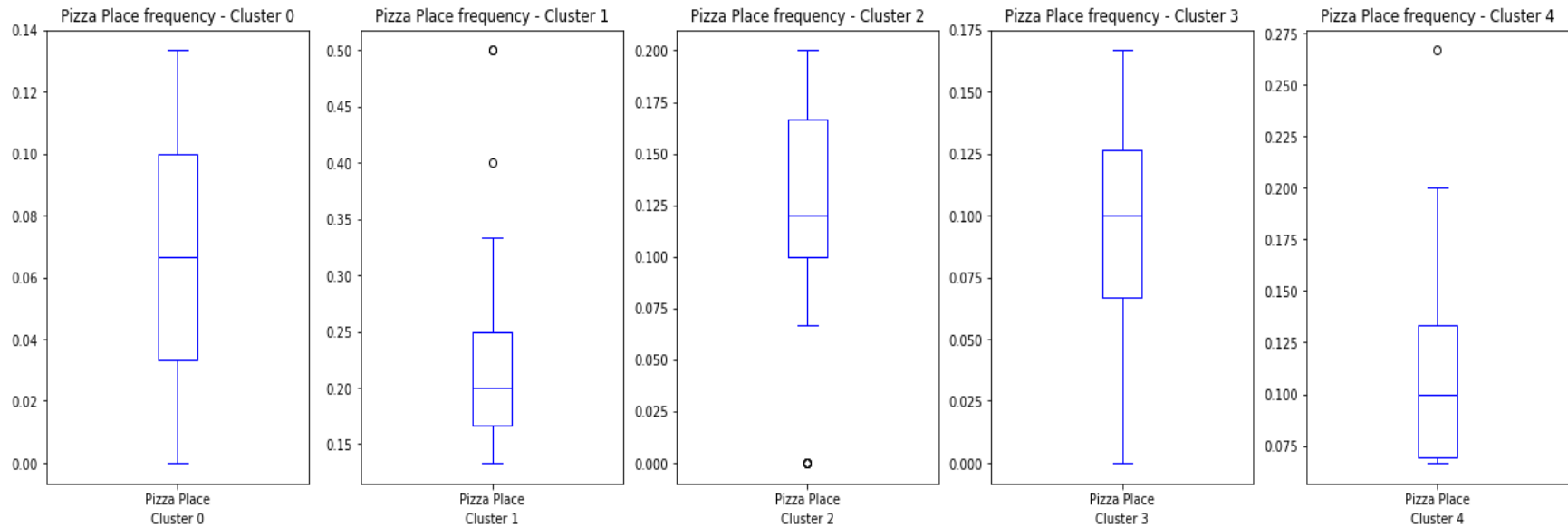
Clusters

We found 5 clusters as follows:



Box Plots

Here are box plots for every cluster:



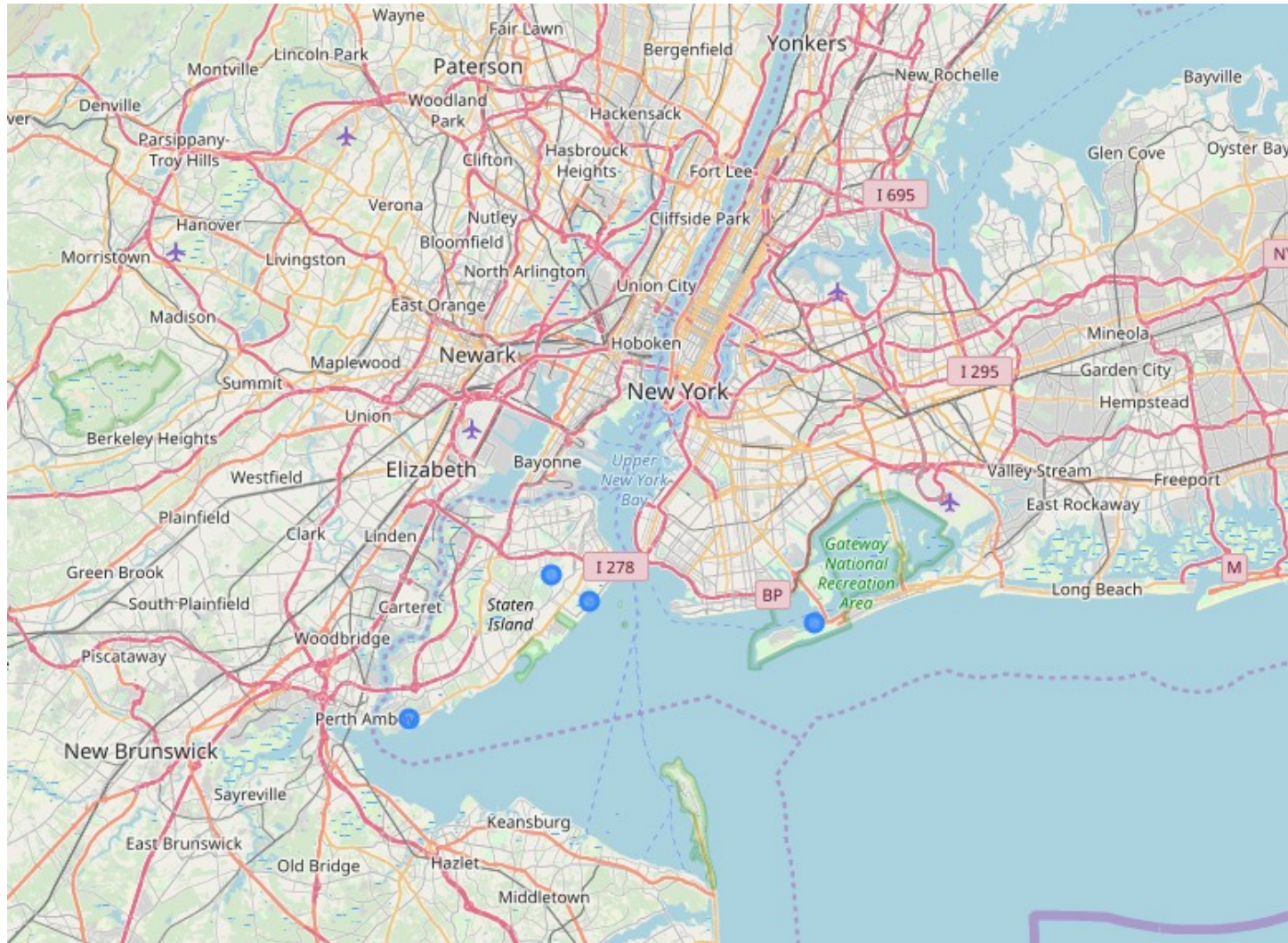
Outliers in cluster 2!

The candidates

We determine the neighborhoods that correspond to the outliers in cluster 2:

	Neighborhood	Pizza Place
12	Butler Manor	0.0
60	Roxbury	0.0
63	South Beach	0.0
67	Todt Hill	0.0

The neighborhoods on the map



Conclusions

- **We have found four possible neighborhoods in which the opening of a new pizza place would face a weaker competition.**
- **The absence of pizza places in a neighborhood doesn't necessarily mean that there is room for one.**
- **As expectable there doesn't seem to be much room in central areas**

Possible improvements

- **Try different numbers of clusters and maybe a different clustering method**
- **Adding more features in the analysis e.g. the price range for the pizza place to be opened and for the ones retrieved via the Foursquare API.**