

Let's assume the investor is choosing between different boroughs of New York. What is the best place to open a new italian restaurant?

To find out, let's make several simple steps in Python.

1. Download population of NYC boroughs and process the data

	Borough	Population
0	Bronx	1418207
1	Brooklyn	2559903
2	Manhattan	1628706
3	Queens	2253858
4	Staten Island	476143

2. Create a dataframe of all neighborhoods in NY, with coordinates

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806
3	Bronx	Fieldston	40.895437	-73.905643
4	Bronx	Riverdale	40.890834	-73.912585

3. Use coordinates to find venues in these neighborhoods and leave only those belonging to the italian restaurants category

	Neighborhood	Venue	Id
132	Woodlawn	Patrizia's Of Woodlawn	511edb6de4b0d58346fd272d
207	Pelham Parkway	Enzo's	4bf96ae65317a593d837017f
217	Pelham Parkway	Pasta Pasta	4b47f069f964a5208c4426e3
234	City Island	Artie's Steak and Seafood	4514ed4df964a520e5391fe3
576	Throgs Neck	Tosca Marquee	4d4456d93616b60c953fe3c2

4. Add borough column and use it to group venues by borough. Then count them

	Borough	Number
0	Bronx	35
1	Brooklyn	47
2	Manhattan	65
3	Queens	37
4	Staten Island	45

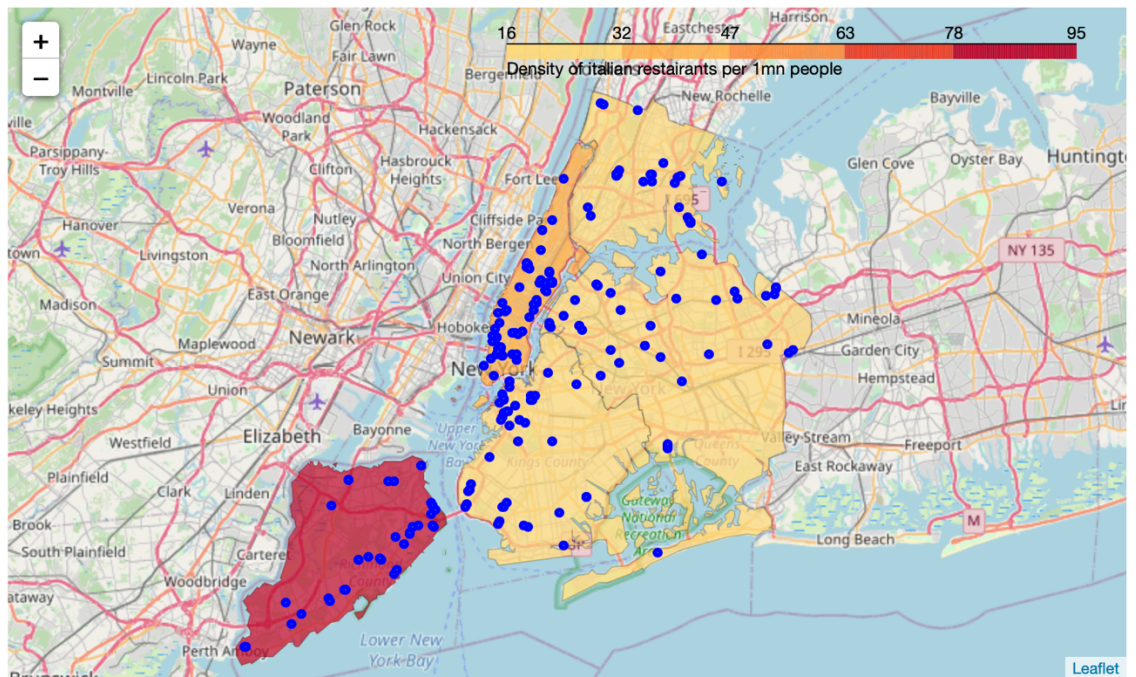
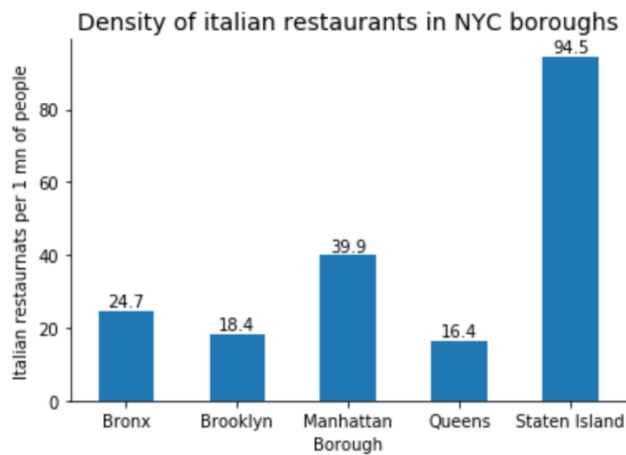
5. Now we need to assess the density of restaurants in these boroughs. Use population data

	Borough	Population
0	Bronx	1418207
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6. Applying it to the previous data, calculate the density

	Borough	Number	Population	Per mn of people
0	Bronx	35	1418207	24.679049
1	Brooklyn	47	2559903	18.360071
2	Manhattan	65	1628706	39.908983
3	Queens	37	2253858	16.416296
4	Staten Island	45	476143	94.509423

7. That's it. Let's put it on a barchart and on the map



The density of venues of the considered category is the least at Queens and Brooklyn. The conclusion is that the one who opens a new italian restaurant in these location will have the highest chances to prosper due to the lowest competetion.