

Coursera Capstone Project Report

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1. Introduction

Just imagine finding a well paid job in New York. Finally having this grand and diverse city as your new home. As many people found out, it can also be tricky to go there. What if you feel strange? Or you find out you don't like your Neighborhood? This App will help you getting along by finding the right Neighborhood to move to based on where you live now. So you won't feel alone and strange. For anyone renting apartments it can be profitable as well. People find the right place to call home faster and are more happy, thus they will stay longer. Plus they will recommend you.

2. Data

We will use data based on the Foursquare API. With it we can gather information on all venues in a given Neighborhood of New York. We will also gather the same information for the place you are currently living in. The data is then selected and cleaned for the ten most common types of venues in each area. On this basis all Neighborhoods shall be compared.

3. Methodology

The angle is to compare Neighborhoods by the type of venues you find there. Amenities like cafes, ethnic restaurants make much of the feel of the place to live. Also, being businesses carefully placed where they are, it can be expected to say something about the living environment in general. Be it Espresso bars in busy business areas or ice cafes in places for families.

4. Results

In this example we compare the neighborhood Eimsbüttel within Hamburg / Germany with the New York neighborhoods.

Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0 Eimsbüttel	Ice Cream Shop	Pharmacy	Sandwich Place	Dessert Shop	Donut Shop	Fast Food Restaurant	Field	Farmers Market	Farm	Eastern European Restaurant

This table shows the most common venues for Eimsbüttel, Hamburg.

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
9	Williamsbridge	Caribbean Restaurant	Soup Place	Bar	Nightclub	Women's Store	Egyptian Restaurant	Filipino Restaurant	Field	Fast Food Restaurant	Farmers Market
33	Morris Park	Deli / Bodega	Pizza Place	Italian Restaurant	Burger Joint	Eastern European Restaurant	Filipino Restaurant	Field	Fast Food Restaurant	Farmers Market	Farm
67	Red Hook	Bakery	Wine Shop	New American Restaurant	American Restaurant	Sandwich Place	Factory	Egyptian Restaurant	Electronics Store	Empanada Restaurant	Event Space
130	Woodside	Thai Restaurant	Bakery	Fast Food Restaurant	Pub	Latin American Restaurant	Event Space	Eastern European Restaurant	Egyptian Restaurant	Electronics Store	Empanada Restaurant
136	Kew Gardens	Pizza Place	Indian Restaurant	South American Restaurant	Juice Bar	Trail	Women's Store	Event Space	Egyptian Restaurant	Electronics Store	Empanada Restaurant
162	Queens Village	Mobile Phone Shop	Fast Food Restaurant	Sandwich Place	Discount Store	Martial Arts Dojo	Field	Farmers Market	Farm	Eastern European Restaurant	Falafel Restaurant
185	Hillcrest	Ice Cream Shop	Mobile Phone Shop	College Basketball Court	College Academic Building	Dim Sum Restaurant	Farm	Empanada Restaurant	Event Space	Factory	Falafel Restaurant
220	Sunnyside	Pizza Place	Market	Bakery	Spa	Peruvian Restaurant	American Restaurant	Seafood Restaurant	Grocery Store	Gym	Electronics Store
238	Butler Manor	Baseball Field	Convenience Store	Pool	Bus Stop	Egyptian Restaurant	Fish & Chips Shop	Filipino Restaurant	Field	Fast Food Restaurant	Farmers Market
241	Arden Heights	Pizza Place	Pharmacy	Coffee Shop	Playground	Cycle Studio	Cupcake Shop	Filipino Restaurant	Field	Fast Food Restaurant	Farmers Market
252	Shore Acres	Italian Restaurant	Bar	Gastropub	Women's Store	Egyptian Restaurant	Fish & Chips Shop	Filipino Restaurant	Field	Fast Food Restaurant	Farmers Market
282	Broadway Junction	Ice Cream Shop	Sandwich Place	Fried Chicken Joint	Burger Joint	Caribbean Restaurant	Department Store	Electronics Store	Filipino Restaurant	Field	Fast Food Restaurant

This table shows the best matching Neighborhoods in New York.

5. Discussion

As you can see, the results are comparable and share many properties. Overall we see family friendly Neighborhoods, with parks and water close by. For the generally better earning population there is a variety of international restaurants and a few bars. Nightlife is less to be found.

6. Conclusion

In conclusion, this is one way to recommend areas to move to. Foursquare data has proven to be plenty and useful for this task. We didn't compare any time-series data for example Morning / Noon / Night to see how each area changes throughout the day. Also there might be seasonal changes such as Christmas markets. These could be topics for further studies, as well as a comparison by price.