

CAPSTONE PROJECT
COURSERA : FINDING
LOCATION IN
BROOKLYN TO OPEN
UP A BAKERY

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INTRODUCTION

New York city is the financial capital of USA. On a daily basis many new business keep on opening and closing. A lot of factors need to be kept in mind when opening a business. One of them is the appropriate location because numerous business fail due to poor location choice.

PROBLEM STATEMENT

My client wishes to open up a Bakery in New York particularly in the Brooklyn area. As Brooklyn has a lot of neighbourhoods, he wishes to get the most appropriate location to open up his bakery.

After careful analysis we came upon a decision that we need to find the location that does not have many bakery but that alone is not sufficient. For a bakery to perform successfully the area must show potential that opening a bakery there would be profitable. This potential of the areas will be determined by the top venues of that area. We want the top venues of that area to be something in the line of bakery or compliments it. So we will select those areas which have Café, Coffee shops and bars as their top venues keeping in mind that there must not be lot of bakery in that area as it would result in a tough competition.

DATA

DATA SOURCE

To perform this analysis, we will need the following data:

- A dataset that contains information about neighbourhoods of Brooklyn
- Venues's information of each neighbourhood.

Neighbourhoods data of Brooklyn will be obtained from dataset

link: https://geo.nyu.edu/catalog/nyu_2451_34572

Top venues data will be obtained from Foursquare through an API.

DATA EXTRACTION AND CLEANING

The data collected from New York csv file will be converted to a dataframe using pandas. Then from that dataframe a new dataframe will be extracted which contains neighbourhood information of Brooklyn.

Once it is done the co-ordinates of each neighbourhood will be extracted using geolocator and a dataframe will be created having the neighbourhood of Brooklyn and its latitude and longitude.

	Borough	Neighborhood	Latitude	Longitude
0	Brooklyn	Bay Ridge	40.625801	-74.030621
1	Brooklyn	Bensonhurst	40.611009	-73.995180
2	Brooklyn	Sunset Park	40.645103	-74.010316
3	Brooklyn	Greenpoint	40.730201	-73.954241
4	Brooklyn	Gravesend	40.595260	-73.973471

Then we will use Foursquare API to extract top venues of each neighbourhood and merge it with the dataframe containing neighbourhood information of Brooklyn.

	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	Bath Beach	Chinese Restaurant	Pizza Place	Pharmacy	Italian Restaurant	Bubble Tea Shop	Fast Food Restaurant	Gas Station	Park	Cantonese Restaurant	Surf Spot
1	Bay Ridge	Spa	Italian Restaurant	Greek Restaurant	Pizza Place	Pharmacy	American Restaurant	Chinese Restaurant	Bar	Bagel Shop	Mediterranean Restaurant
2	Bedford Stuyvesant	Pizza Place	Coffee Shop	Bar	Café	Deli / Bodega	Park	Discount Store	Cocktail Bar	New American Restaurant	Tiki Bar
3	Bensonhurst	Chinese Restaurant	Italian Restaurant	Sushi Restaurant	Donut Shop	Ice Cream Shop	Liquor Store	Russian Restaurant	Cha Chaan Teng	Noodle House	Sporting Goods Shop
4	Bergen Beach	Harbor / Marina	Playground	Donut Shop	Athletics & Sports	Baseball Field	Fish Market	Fish & Chips Shop	Filipino Restaurant	Field	Fast Food Restaurant
5	Boerum Hill	Dance Studio	Coffee Shop	Bar	French Restaurant	Furniture / Home Store	Bakery	Sandwich Place	Arts & Crafts Store	Gym / Fitness Center	Spa
6	Borough Park	Bank	Pizza Place	Pharmacy	Fast Food Restaurant	Hotel	Grocery Store	Coffee Shop	Restaurant	Chinese Restaurant	Café