

Opening A vegetarian restaurant in Brooklyn, NYC

Final report

Introduction and business problem

Brooklyn is one of the most diverse places in New York. Here live over 30% of NY population. However, when it comes to vegetarian food, not many places offer good deals. Vegetarianism is more welcome among young population. In this project I'll come up with some possible location options for the venue.

The problem to solve: *Open a vegetarian restaurant of the mid-range price category in Brooklyn.* In specific, I decided to take a baseline location point the NYC College of Technology. The place is close to subway stations (as will be presented below), and has not got many dining venues so far. Therefore, the *stakeholders are mostly young people preferring vegetarian food and local employees in vicinity.*

Data

In the framework of this project, I'll be using several data sources, including:

- New York neighborhood data as per NY neighborhood data
- NYC real estate sales data (<https://geo.nyu.edu/catalog/nyu-2451-34678>)
- Foursquare api service (<https://api.foursquare.com/>)
- NY subway stations data (<https://geo.nyu.edu/catalog/nyu-2451-34503>)
- NY universities locations (<https://geo.nyu.edu/catalog/nyu-2451-34491>)

These will be used to build the neighborhood profile in vicinity and better identify if the area worth starting a business at. For instance, **NYC real estate data** will give the first insights on the price range to buy a place if needed, as well as will give some insights on the solvency of the local population. While **foursquare data** will help build the profile of the restaurants in vicinity and identify some potential competitors. **University locations** will help determine if the starting point location (to be discussed in the main report methodology section) presents the point of university agglomeration. **Subway stations** will be used to illustrate good commute options.

From the sources above, with exception of foursqaure, was downloaded as shapefiles and, since not everywhere JSON option was working, later on converted to csv using *mygeodata* service: <https://mygeodata.cloud/converter/shp-to-csv>

Findings

The purpose of this project has been to investigate and segment the neighborhoods in Brooklyn. In specific, with respect to opening the vegetarian restaurant in vicinity of NYC College of Technology. The report is purely descriptive, to provide for the essence of the findings, while the code and illustrations are presented in the notebook and presentation pieces. The starting point has been taken with respect to proximity to the metro stations, high number of young people who are more likely to consume organic / vegetarian food. The requirement was to open the spot in middle range income area. For this purpose, I analyzed a more macro indicator of real estate sales, revealing that our territory indeed is a mid-income range one. The analysis presented that most of the nearby buildings where flats were sold, belong to the cluster 0, which corresponds to the COOPS - ELEVATOR APARTMENTS, CONDOS - ELEVATOR APARTMENTS and RENTALS - WALKUP APARTMENTS with price between 550,000 USD and 1,200,000 USD. This is the most populous cluster.

Second, I segmented the restaurant venues in proximity of 2 km, in order to reach the optimal distribution / number of places. It turned out that most of the direct competitors would be American and European restaurants plus Pizza places, mid-range restaurants. Since our restaurant is going to be vegetarian and middle range income, our direct competitors would be mostly cluster 0 and 1 venues, even if they're further located. There's even one direct competitor, another veggie venue - Wild Ginger, in cluster 2, located about 900 m from the college. But it's a more expensive venue, which can be of advantage to us. The College of Technology indeed appeared to be a part of educational conglomerate as shown on the map, with 5 institutions presented in total, namely: NYC College of Technology, St Francis College, Brooklyn Law School, ASA College, and Institute of Design and Construction.

Also, the area has excellent commute with three subway stations present, i.e. Court St., Borough hall, and Jay St MetroTech.

Finally, I recommend to locate a new restaurant nearby Jay Street, Adams Street, Fulton Mall, Boothby street, and Tillary Street. Also, an alternative could be on Remsen street, near the St Francis College. It's close to the subway station at Court St., and has no many competitors too close.

Conclusion

In the end, the possible locations for a new vegetarian restaurant in Brooklyn are nearby Jay Street, Adams Street, Fulton Mall, Boothby street, and Tillary Street. These streets present a good commute options, not far from the universities. Some other smaller streets in vicinity such as Chapel st. could be taken as well, however we must make sure it's not directly near the cathedral like there.

The project has been quite a challenge; however I am glad I finished it. Hope that my findings at least present a healthy way of analysis and are a good starting point for a more in-depth analysis to the potential investor who indeed would open a restaurant like this in Brooklyn.

The project necessarily had certain limitations which are related with the lack of the current data, for example, on the real estate sales. And in a commercial project some more thorough investigation would be necessary. Also, it wasn't possible to identify the exact street numbers given the lack of the onsite knowledge, and available spots for rent and / or sale. Next, for a business problem, some more exact information like the investor budget and preferences would be required as a starting point for analysis.

Annex 1 – Codes of New York building types

A. Class A Buildings - One Family Dwellings

- [A0 Cape Cod](#)
- [A1 Two Stories Detached \(Small or Moderate Size, With or Without Attic\)](#)
- [A2 One Story \(Permanent Living Quarters\)](#)
- [A3 Large Suburban Residence](#)
- [A4 City Residence](#)
- [A5 Attached or Semi-Detached](#)
- [A6 Summer Cottages/Mobile Homes/Trailers](#)
- [A7 Mansion Type](#)
- [A8 Bungalow Colony/Land Coop Owned](#)
- [A9 Miscellaneous \(Old Buildings, Attached & Semi-Detached Frame Houses, etc.\)](#)

Class B Buildings - Two Family Dwellings

- [B1 Brick](#)
- [B2 Frame](#)
- [B3 Converted \(From One Family\)](#)
- [B9 Miscellaneous \(City Type, Old, etc.\)](#)

Class C Buildings - Walk Up Apartments

- [C0 Three Families](#)
- [C1 Over Six Families Without Stores](#)
- [C2 Five to Six Families](#)
- [C3 Four Families](#)
- [C4 Old Law Tenements](#)
- [C5 Converted Dwelling or Rooming House](#)
- [C6 Cooperative \(Other Than Condominiums\)](#)
- [C7 Over Six Families With Stores](#)
- [C8 Co-op Conversion From Loft/Warehouse](#)
- [C9 Garden Apartments/Mobile Home Park/Trailer Park](#)

Class D Buildings - Elevator Apartments

- [D0 Co-op Conversion From Loft/Warehouse](#)
- [D1 Semi-fireproof \(Without Stores\)](#)
- [D2 Artists in Residence](#)
- [D3 Fireproof \(Standard Construction Without Stores\)](#)
- [D4 Cooperatives \(Other Than Condominiums\)](#)
- [D5 Converted](#)
- [D6 Fireproof - With Stores](#)
- [D7 Semi-Fireproof With Stores](#)

- [D8 Luxury Type](#)
- [D9 Miscellaneous](#)

Class R Buildings - Condominiums

- [R0 Condo Billing Lot](#)
 - [R1 2-10 Unit Residential Bldg, Residential Unit](#)
 - [R2 Walk-up, Residential Unit](#)
 - [R3 1-3 Story, Residential Unit](#)
 - [R4 Apartment/Elevated, Residential Unit](#)
 - [R5 Commercial Unit](#)
 - [R6 1-3 Units, Residential Unit](#)
 - [R7 1-3 Units, Commercial Unit](#)
 - [R8 2-10 Unit Residential Bldg, Commercial Unit](#)
 - [R9 Condop](#)
 - [RA Cultural, Medical, Educational, Etc.](#)
 - [RB Office Space](#)
 - [RC Commercial Building \(Mixed Commercial Condo Building\)](#)
 - [RG Indoor Parking](#)
 - [RH Hotel/Boatel](#)
 - [RK Retail Space](#)
 - [RM Mixed Residential & Commercial Building \(Mixed Residential & Commercial Condo Building\)](#)
 - [RP Outdoor Parking](#)
 - [RS Non-Business Storage Space](#)
 - [RT Terraces/Gardens/Cabanas](#)
 - [RW Warehouse/Factory/Industrial](#)
 - [RD Residential Building \(Mixed Residential Condo Building\)](#)
 - [RI Mixed Warehouse/Factory/Industrial & Commercial](#)
 - [RX Mixed Residential & Commercial Building](#)
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Mixed Use

A. Class S Buildings - Residence - Multiple Use

- [S0 Primarily One Family with Two Stores or Offices](#)
 - [S1 Primarily One Family With Store or Office](#)
 - [S2 Primarily Two Family With Store or Office](#)
 - [S3 Primarily Three Family With Store or Office](#)
 - [S4 Primarily Four Family With Store or Office](#)
 - [S5 Primarily Five to Six Family With Store or Office](#)
 - [S9 Primarily One to Six Families with Stores or Offices](#)
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Commercial Buildings

A. Class H Buildings - Hotels

- [H1 Luxury Type - Built Prior to 1960](#)
- [H2 Luxury Type - Built After 1960](#)
- [H3 Transient Occupancy-Midtown Mn Area](#)
- [H4 Motels](#)
- [H5 Private Club, Luxury Type](#)
- [H6 Apartment Hotels](#)
- [H7 Apartment Hotels-Co-op Owned](#)
- [H8 Dormitories](#)
- [H9 Miscellaneous](#)

Class K Buildings - Store Buildings (Taxpayers Included)

- [K1 One Story Store Building](#)
- [K2 Two Story or Store and Office](#)
- [K3 Department Stores, Multi-Story](#)
- [K4 Stores, Apartments Above](#)
- [K5 Diners, Franchised Type Stand](#)
- [K6 Shopping Centers With Parking Facilities](#)
- [K7 Funeral Home](#)
- [K9 Miscellaneous](#)

Class L Buildings - Loft Buildings

- [L1 Over Eight Stories \(Mid-Manhattan Type With or Without Stores\)](#)
- [L2 Fireproof - Loft and Storage Type \(Without Retail Stores\)](#)
- [L3 Semi-Fireproof](#)
- [L8 With Retail Stores \(Other Than Type 1\)](#)
- [L9 Miscellaneous](#)

Class O Buildings - Office Buildings

- [O1 Fireproof - Up to Nine Stories](#)
 - [O2 Ten Stories & Over \(Side Street Type\)](#)
 - [O3 Ten Stories & Over \(Main Avenue Type\)](#)
 - [O4 Tower Type](#)
 - [O5 Semi-Fireproof](#)
 - [O6 Bank Building \(Designed Exclusively for Banking\)](#)
 - [O7 Professional Buildings](#)
 - [O8 With Residential Apartments](#)
 - [O9 Miscellaneous](#)
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Industrial Buildings

A. Class E Buildings - Warehouses

- [E1 Fireproof](#)
- [E3 Semi-Fireproof](#)
- [E4 Frame, Metal](#)
- [E7 Warehouse, Self Storage](#)
- [E9 Miscellaneous](#)

Class F Buildings - Factory And Industrial Buildings

- [F1 Heavy Manufacturing \(Fireproof\)](#)
- [F2 Special Construction \(Printing Plant, etc., Fireproof\)](#)
- [F4 Semi-Fireproof](#)
- [F5 Light Manufacturing](#)
- [F8 Tank Farms](#)
- [F9 Miscellaneous](#)

Class G Buildings - Garages And Gasoline Stations

- [G0 Residential Tax Class 1 Garage](#)
- [G1 Garage - Two or More Stories](#)
- [G2 Garage - One Story \(Semi-Fireproof or Fireproof\)](#)
- [G3 Garage and Gas Station Combined](#)
- [G4 Gas Station - With Enclosed Lubrication Plant or Workshop](#)
- [G5 Gas Station - Without Enclosed Lubrication Plant or Workshop](#)
- [G6 Licensed Parking Lot](#)
- [G7 Unlicensed Parking Lot](#)
- [G8 Garage With Showroom](#)

- [G9 Miscellaneous](#)

Class T Buildings - Transportation Facilities (Assessed In Ore)

- [T1 Airports, Air Fields, Terminals](#)
- [T2 Piers, Docks, Bulkheads](#)
- [T9 Miscellaneous](#)

Class U Buildings - Utility Bureau Properties

- [U0 Utility Company Land and Buildings](#)
 - [U1 Bridges, Tunnels, Highways](#)
 - [U2 Electric Utilities, Gas](#)
 - [U4 Telephone Utilities](#)
 - [U5 Communications Facilities \(Other Than Telephone\)](#)
 - [U6 Railroads, Private Ownership](#)
 - [U7 Transportation, Public Ownership](#)
 - [U8 Revocable Consents](#)
 - [U9 Miscellaneous \(Including Private Improvements in City Land and in Public Places\)](#)
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Buildings with Civic Use

A. Class I Buildings - Hospitals And Health

- [I1 Hospitals, Sanitariums, Mental Institutions](#)
- [I2 Infirmary](#)
- [I3 Dispensary](#)
- [I4 Staff Facilities](#)
- [I5 Health Center, Child Center, Clinic](#)
- [I6 Nursing Home](#)
- [I7 Adult Care Facility](#)
- [I9 Miscellaneous](#)

Class J Buildings - Theatres

- [J1 Art Type \(Seating Capacity Under 400 Seats\)](#)
- [J2 Art Type \(Seating Capacity Over 400 Seats\)](#)
- [J3 Motion Picture Theatre With Balcony](#)
- [J4 Legitimate Theatres \(Theatre Sole Use of Building\)](#)
- [J5 Theatre as Part of Building of Other Use](#)
- [J6 Television Studios](#)
- [J7 Off-Broadway Type](#)
- [J8 Multi-Motion Picture Theatre](#)
- [J9 Miscellaneous](#)

Class M Buildings - Churches, Synagogues, Etc.

- [M1 Church, Synagogue, Chapel](#)
- [M2 Mission House \(Non-Residential\)](#)
- [M3 Parsonage, Rectory](#)
- [M4 Convents](#)
- [M9 Miscellaneous](#)

Class N Buildings - Asylums And Homes

- [N1 Asylums](#)
- [N2 Homes for Indigent Children, Aged, Homeless](#)
- [N3 Orphanages](#)
- [N4 Juvenile Detention Houses](#)
- [N9 Miscellaneous](#)

Class P Buildings - Places Of Public Assembly (Indoor) And Cultural

- [P1 Concert Halls](#)
- [P2 Lodge Rooms](#)
- [P3 YWCA,YMCA,YWHA,YMHA,PAL](#)
- [P4 Beach Club](#)
- [P5 Community Center](#)
- [P6 Amusement Places, Bathhouses, Boat Houses](#)
- [P7 Museum](#)
- [P8 Library](#)
- [P9 Miscellaneous Including Riding Academies and Stables](#)

Class Q Buildings - Outdoor Recreation Facilities

- [Q1 Parks](#)
- [Q2 Playgrounds](#)
- [Q3 Outdoor Pools](#)
- [Q4 Beaches](#)
- [Q5 Golf Courses](#)
- [Q6 Stadium, Race Tracks, Baseball Fields](#)
- [Q7 Tennis Courts](#)
- [Q8 Marinas/Yacht Clubs](#)
- [Q9 Miscellaneous](#)

Class W Buildings - Educational Structures

- [W1 Public Elementary Junior and Senior High Schools](#)
- [W2 Parochial Schools, Yeshivas](#)
- [W3 Schools or Academies](#)
- [W4 Training Schools](#)
- [W5 City University](#)
- [W6 Other Colleges and Universities](#)
- [W7 Theological Seminaries](#)
- [W8 Other Private Schools](#)
- [W9 Miscellaneous](#)