

# **The Battle of Neighborhoods- Report**

## **Introduction and Business Problem:**

New York City is the most populous city and the financial capital of the United States. During early 2020, it became the biggest victim of COVID-19, a virus that caused a devastating pandemic. A lot of cases and deaths have been reported since then, an extensive lockdown was imposed by the government, the economy was hit very hard and overall, there has been a lot of damage to public life and it is very obvious that the transition to normalcy will be a very hard and tedious process.

New York City is among the most important hubs for businesses and commerce in the world. When the economy normalizes again, the economy will boom as usual and markets will become competitive again.

But that doesn't change the fact that people have been disproportionately affected by the pandemic and a lot of them will be struggling economically. This includes a lot of business owners or people who were about to start a venture, and also for investors who will be skeptical about investing in New York, given that the situation is very volatile and public safety is hard to ensure.

As of now, the situation has been brought to control and the transition period has started. The insights derived from the impact of the virus in different places will allow us to understand where business and investment will be least risky and the return on investment will be reasonable.

## **Problem Description:**

One of the major businesses that will play an active role in contributing to the economy after the pandemic is completely contained and the lockdown is eased is the restaurant business. There has been an active shortage of eatables and buying groceries from department stores isn't financially feasible for many people, let alone cook at home because of their busy lifestyle. So, people have always been inclined to dine outside and order food (ordering has also been prominent during the lockdown) and now, since people want to avoid contact as much as possible, cheap restaurants and takeaway food will be the go-to option for many people once life resumes.

With social distancing norms and safety concerns, it will be hard for new ventures to open up. So, after the lockdown it will be important to put safety first while opening up a restaurant strategically, which means to find places least affected by COVID-19. Places that have been least impacted will also do reasonably well in profits, given that get enough customers. But there are also other economic factors to understand while opening up a business like:

1. Average income of the residents.
2. Competition. There are about 50,153 restaurants (as of 2018) in New York City. It is important to analyze the scene of restaurants in the location.
3. Access to raw materials and ingredients. For this, we need to look at locations of Farmer's market and Wholesale markets and how accessible they are.
4. Market saturation.

Amongst many other factors. So, this project will help anyone seeking to open up a restaurant business economically feasible for the people or the ones looking to invest in them as soon as possible by giving them a choice of location where investment will be wise.

**Target audience:**

1. Anyone looking to start a new, non-high-end and restaurant (like fast food) business in New York City after the lockdown.
2. Anyone looking to invest in existing restaurants in New York City soon.
3. Anyone looking for safe places to eat.

**Success Criteria:**

The success criteria of this project are contingent upon finding the safest, yet economically viable and competent neighborhood in the safest borough for a restaurant business based on forecasting the effect of COVID-19 and other economic factors.

## **Data Used in Analysis**

### **Data 1:**

New York City will be analyzed in this project and for this we will use the link [https://geo.nyu.edu/catalog/nyu\\_2451\\_34572](https://geo.nyu.edu/catalog/nyu_2451_34572) to get required geospatial data in a json file and convert it to a readable format.

### **Data 2:**

Daily statistics of COVID-19 cases in each borough to be used for forecasting and finding the safest borough pulled from:

<https://github.com/nychealth/coronavirusdata/blob/master/boro/boroughs-case-hosp-death.csv> (latest date: 26th May 2020)

### **Data 3:**

COVID-19 statistics in each neighborhood to find the safest neighborhood pulled from: <https://github.com/nychealth/coronavirus-data/blob/master/data-by-modzcta.csv> (latest date: 26<sup>th</sup> May 2020)

### **Data 4:**

Income statistics in New York City by neighborhood to analyze the economic conditions of the desired location to understand the economic demographic of the chosen location better: <https://ny.curbed.com/2017/8/4/16099252/new-york-neighborhood-affordability>

### **Data 5:**

Data on Farmer's market and their locations to find the best proximity to open a restaurant: <https://data.cityofnewyork.us/dataset/DOHMH-Farmers-Markets/8vwk-6iz2/data>

### **Data 6:**

Foursquare API will be use to explore neighborhoods and generate venue information for each neighborhood to find restaurants nearby and competition.

### **Data 7:**

Information on demographics and population of New York City for better understanding and calculations: [https://en.wikipedia.org/wiki/New\\_York\\_City](https://en.wikipedia.org/wiki/New_York_City)