

THE BATTLE OF NEIGHBOURHOODS

IBM APPLIED DATA SCIENCE CAPSTONE

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INTRODUCTION

The City of New York, is the most populous city in the United States. It is diverse and is the financial capital of USA. It is multicultural. It provides lot of business opportunities and business friendly environment. It has attracted many different players into the market. It is a global hub of business and commerce. The city is a major center for banking and finance, retailing, world trade, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accountancy, insurance, theatre, fashion, and the arts in the United States. This also means that the market is highly competitive. As it is highly developed city so cost of doing business is also one of the highest. Thus, any new business venture or expansion needs to be analysed carefully. The insights derived from analysis will give good understanding of the business environment which help in strategically targeting the market. This will help in reduction of risk. And the Return on Investment will be reasonable.

BUSINESS PROBLEM

The objective of this project is to recommend the most favourable neighbourhood for setting up an Indian Restaurant in New York City. The major issues faced while opening any restaurant are rentals and competition. Hence to open up a Indian Restaurant in NYC we will need to recommend a neighbourhood that has reasonable rent and least competition from other Indian Restaurants. Furthermore we will try to suggest restaurants that are in close proximity to high rentals neighbourhoods since these neighbourhoods will be the tourist attraction and place for many offices, university and hotels. Hence having a restaurant nearby to these neighbourhoods will attract residents and tourists from these locations to the restaurant.

TARGET AUDIENCE

Stakeholders: Any Businessman that wants to open a Indian Restaurant in New York City. This project will help them decide which neighbourhood will be the best option to open up the restaurant.

Consumers: The residents of New York City and tourists who come to visit New York City who want to taste Indian food. Hence opening a restaurant in a neighbourhood which has less proximity to high rent neighbourhoods where usually the hotels, offices and universities are located will give the restaurant an advantage to attract consumers who reside in these areas as these areas will be more populous when compared to other areas thus increasing the check-in count of the restaurant.

DATA

To solve the problem, we will need the following data:

1. List of neighbourhoods in New York City. Latitude and longitude coordinates of those neighbourhoods. This is required in order to plot the map and also to get the venue data. https://geo.nyu.edu/catalog/nyu_2451_34572
2. The rent of neighbourhoods in New York City. (<https://www.zillow.com/research/data/>)
3. From Foursquare we will need to find the venues related to Indian Restaurants. By using data we will be able to cluster the neighbourhoods based on the number of Indian Restaurants in each neighbourhood. This will help us to determine which neighbourhood will have least competition for establishing an Indian Restaurant.
4. From Distance Matrix API of Google Cloud Platform we will extract distance matrix between different neighbourhoods.

We will then leverage the data in order to determine which locality is the most appropriate in order to locate the Indian Restaurant.