

A decorative graphic on the left side of the slide consisting of white lines and circles on a blue gradient background, resembling a circuit board or a stylized tree structure.

CAPSTONE PROJECT - THE BATTLE OF NEIGHBORHOODS (WEEK 1)

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SELECTING THE BEST NEIGHBORHOOD TO OPEN A BAKERY SHOP IN NEW YORK

INTRODUCTION

- People are usually on the go especially in a city like New York where everything is moving so fast.
- This gets us to food that needs to be taken away quickly so people would not waste their time on waiting for food to be done and just take it as the go.
- Bakery Shops are one of the most efficient places to take food as you go.
- Everything is small and fairly cheap and easy to get as you are going.

BUSINESS PROBLEM

- Starting a bakery shop business in New York will be very fruitful.
- You need to be unique as there are many bakeries.
- We found out that we want to open this bakery shop in Manhattan which is a great place to start due to the high traffic of people in the area.
- We need to start finding the best neighborhood to open a bakery which will be next to places that have already succeed in similar areas.
- The main objective of this analysis is to find the best suitable neighborhood in Manhattan for business where we can profit a lot from opening this bakery shop in that particular area.

DATA SELECTION

- First, we will have to get the New York dataset then extract the needed columns from this dataset.

https://cocl.us/new_york_dataset

- Second, find the latitude and longitude for New York to start finding the relevant neighborhoods using this data. Also, start mapping the neighborhoods to see it visually.

```
address = 'New York City, NY'

geolocator = Nominatim(user_agent="ny_explorer")
location = geolocator.geocode(address)
latitude = location.latitude
longitude = location.longitude
print('The geograpical coordinate of New York City are {}, {}'.format(latitude, longitude))
```

The geograpical coordinate of New York City are 40.7127281, -74.0060152.

DATA SELECTION

- FourSquare API will be used to explore New York neighborhoods and boroughs

```
# create the API request URL
url = 'https://api.foursquare.com/v2/venues/search?&client_id={}&client_secret={}&v={}&ll={},{}&radius={}&limit={}'.format(CLIENT_ID, CLIENT_SECRET, VERSION, lat, lng, radius, LIMIT)
```

- Through the above URL.
- You use your client id and secret to get requests from the server.
- After that you start analyzing the data accordingly and cluster them to find the best neighborhoods for a new bakery shop.