

Introduction

As the world is starting to recover health-wise from the coronavirus pandemic, businesses are still struggling. While some companies are capable of continuing operations in a remote, or work from home, basis, dining and personal service businesses typically cannot. As a result, a significant number of companies are struggling financially. This situation is especially true in New York City, where the coronavirus hit especially hard. Dining and personal service businesses have either already gone out of business, or will continue to face liquidity issues until consumers gain enough confidence to begin frequenting those types of companies. If those businesses haven't already closed their doors, there is a strong possibility that they may close their doors in the months to come.

A group of investors has assembled with a new model of dining establishments. Effectively, it is a mix between a restaurant, grocery store, and coffee shop. The design of this new concept intended to support social distancing and safe food and beverage preparation. The business plan that the investors have created calls for researching the neighborhoods in the New York City borough of Manhattan with the highest concentration of coffee shops and cafes. The investor's plan includes starting the concept in one Manhattan neighborhood and then expanding to other boroughs. Once a specific community has been identified, the investors will work through business brokers to start making contingent offers for all or part of each of the coffee shops and cafes in that neighborhood. Once a sufficient number of deals have been closed, the investment group will close all the arrangements and then begin remodeling and re-branding all of the establishments. They will also start a targeted marketing campaign for that neighborhood to educate the members of that community on the benefits and safety in visiting these new types of establishments.

Description of the Data

To complete this research, we need to identify cafes and coffee shops in each neighborhood in New York City. To do that, we will leverage location data that is available from Foursquare. With that data, we can identify venues within a geographical area, and we can also determine the category that best describes the place. Café and coffee shops are two separate categories of sites. So, once the data is collected, those categories will need to be combined. Once the data has been collected and grouped accordingly, we will be able to identify the neighborhood with the highest concentration of cafes and coffee shops.

The data that we receive from Foursquare is broken out by venue. An example of a specific venue record is below.

```
'venue': {'id': '57655be738faa66160da7527',  
  'name': 'Starbucks',  
  'location': {'address': '50 W 225th St',  
    'lat': 40.873754554218515,  
    'lng': -73.90861305343668,  
    'labeledLatLngs': [{'label': 'display',  
      'lat': 40.873754554218515,  
      'lng': -73.90861305343668},  
    {'label': 'entrance', 'lat': 40.873502, 'lng': -73.907986}]},
```

```
'distance': 355,
'postalCode': '10463',
'cc': 'US',
'city': 'New York',
'state': 'NY',
'country': 'United States',
'formattedAddress': ['50 W 225th St',
'New York, NY 10463',
'United States']],
'categories': [{ 'id': '4bf58dd8d48988d1e0931735',
'name': 'Coffee Shop',
'pluralName': 'Coffee Shops',
'shortName': 'Coffee Shop',
'icon': { 'prefix': 'https://ss3.4sqi.net/img/categories_v2/food/coffeeshop_',
'suffix': '.png'},
'primary': True}],
'photos': { 'count': 0, 'groups': []}],
'referralId': 'e-0-57655be738faa66160da7527-8'},
{'reasons': { 'count': 0,
'items': [{ 'summary': 'This spot is popular',
'type': 'general',
'reasonName': 'globalInteractionReason'}]}
```

Within the venue record there is another section of the data for categories. The categories part of the venue record is what we will leverage. By consolidating the categories information for the data, we will be able to answer the question for the investors.