Introduction

Tim Hortons, Canada's largest and most popular fast food restaurant is planning to open new shops in the United States. The company, known for its coffee and its bakery items, has decided to open shops in the city of Los Angeles. Los Angeles is the second-most populous city in the United States, and coffee shops are very popular there. Tim Hortons is looking to locate the shops in busy neighborhoods where coffee shops are frequently visited. Although they have narrowed down to one city, they have yet to decide on the location and the number of stores they want to open.

Data

4 sets of data will be used in this project. Detail description of their collection and usage is given below.

1. Neighborhoods in Los Angeles

This dataset was scraped from the *Los Angeles Times* website. It contains a list of all the 272 neighborhoods in the Los Angeles County.

	Name	Region
0	Acton	Antelope Valley
1	Adams-Normandie	South L.A.
2	Agoura Hills	Santa Monica Mountains
3	Agua Dulce	Northwest County
4	Alhambra	San Gabriel Valley
5	Alondra Park	South Bay
6	Altadena	Verdugos
7	Angeles Crest	Angeles Forest
8	Arcadia	San Gabriel Valley
9	Arleta	San Fernando Valley
10	Arlington Heights	Central L.A.
11	Artesia	Southeast

Figure 1. Some of the neighborhoods in Los Angeles

2. OpenCage Geo Code

OpenCage GeoCode was used to generate the geospatial coordinates of all the neighborhoods in Los Angeles. These coordinates are required by Foursquare location data to know which venues are most popular in the neighborhoods.

	City	Region	Latitude	Longitude
0	Acton	Antelope Valley	34.480742	-118.186838
1	Adams-Normandie	South L.A.	34.033081	-118.297115
2	Agoura Hills	Santa Monica Mountains	34.147910	-118.765704
3	Agua Dulce	Northwest County	34.496382	-118.325635
4	Alhambra	San Gabriel Valley	34.093042	-118.127060

Figure 2. Generated coordinates of the neighborhoods

3. Foursquare Location Data

Foursquare location data are required in two instances.

a. To explore each neighborhood and find the most trending venues. Such as parks, coffee shops, shopping mall, etc.

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue
0	Adams-Normandie	Sushi Restaurant	Café	Taco Place	Donut Shop
1	Agoura Hills	Gym	Pharmacy	Deli / Bodega	Gas Station
2	Agua Dulce	Grocery Store	Pizza Place	Bakery	Café
3	Alhambra	Ice Cream Shop	Bakery	Burger Joint	Café
4	Alondra Park	Gym / Fitness Center	Park	Baseball Field	Fabric Shop

Figure 3. Most common venues in some of the neighborhoods

b. The number of Starbucks in the neighborhood. The higher the number of Starbucks in a neighborhood means more customers to coffee shops. Starbucks is a direct competitor to Tim Hortons.
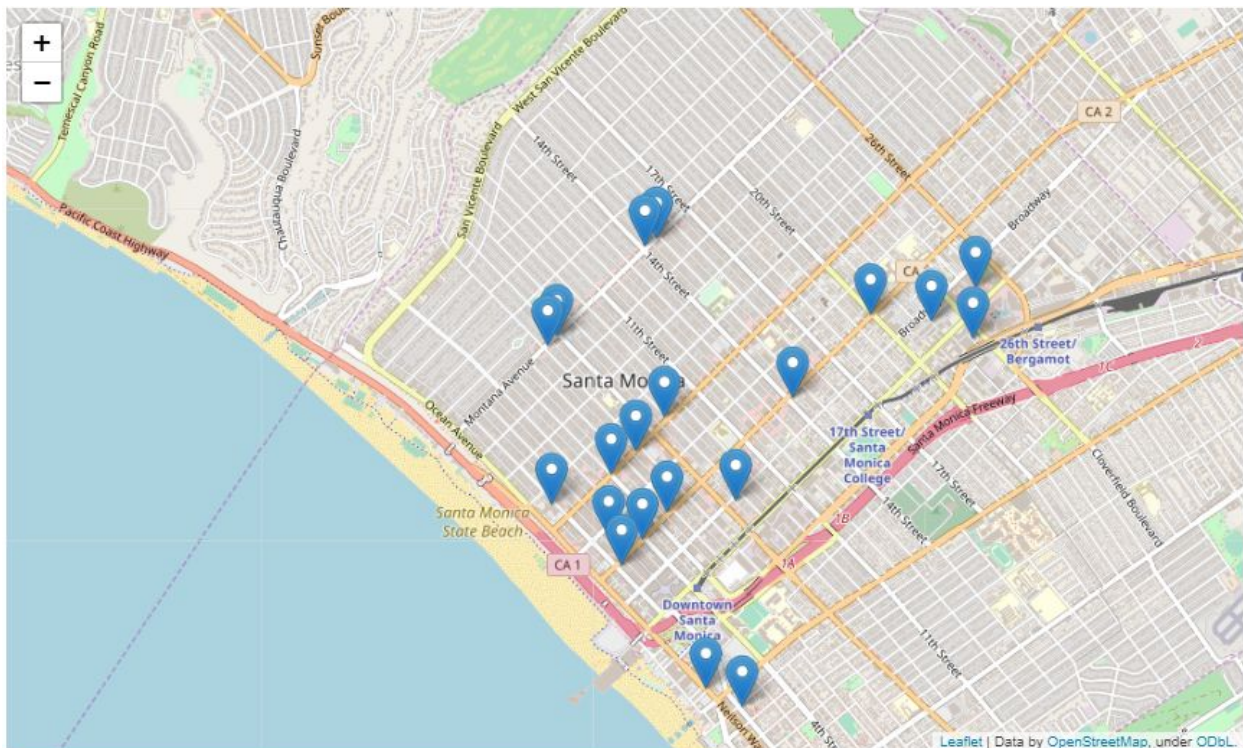

Figure 4. The markers show the location of Starbucks in Santa Monica

4. Population in each Neighborhood

The population data is needed to compare potential customer traffic to coffee shops in the neighborhoods. A higher population of the neighborhood means more potential customers for the shops.

	Neighborhood	Population
0	Atwater Village	29092
1	Century City	8554
2	Claremont	36015
3	Culver City	39283
4	Larchmont	62733
5	Los Feliz	45616
6	Monrovia	37061
7	Norwalk	106084
8	Pacific Palisades	24651
9	Santa Monica	92306
10	Sawtelle	45742
11	South Park	35323
12	Windsor Square	8495

Figure 5. Neighborhoods and their population