

Choosing the leading place to open up a Mexican restaurant within the Toronto Area

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March 19,2020

1. Introduction

1.1 Depiction of the problem

Toronto's competitive gastronomy scene is an amazing one as it is a clash of different chefs and restaurateurs who always bring individuals brand-new places and cuisines to try. But, where is the leading place to open up a Mexican restaurant within the noteworthy Toronto Area?

As a result of a constantly growing population of Toronto, diversity of nations, and increasing demand for new cuisine experience, but also recognizing the fact that opening a restaurant requires significant investment, it would appear to be a great choice to open up a Mexican restaurant within the core of the city. The question to be answered at that point is, which neighborhoods in Downtown Toronto would be the best choice.

1.2 Discussion of the background

Research has been requested by a prosperous and fruitful restaurateur from Mexico who is keen on expanding trade operations into Toronto. He needs to make a genuine Mexican restaurant that will serve and offer the complete lavishness of Mexican culture and cooking to the individuals of Downtown Toronto.

Since Downtown Toronto is exceptionally ambitious in terms of the restaurant domain, my client needs an understanding of the market in order to choose in which neighborhood to set up this trustworthy Mexican diner.

2. Data acquisition and cleaning

2.1 Description of the data

The project will utilize freely accessible information from Wikipedia and Foursquare. Precisely, all Toronto neighborhood complex elements besides their postal codes are accessible here: https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M. The center of this venture will be the Downtown Toronto neighborhoods that will be analyzed accordingly. The Foursquare API will be used to get the geological area information for Downtown Toronto, and data will be utilized to investigate the eatery within the neighborhoods. The restaurants will give the categories required for the investigation and these will be utilized to decide the reasonability of the chosen areas for the Mexican food establishment.

2.2 How information will be utilized to find a solution

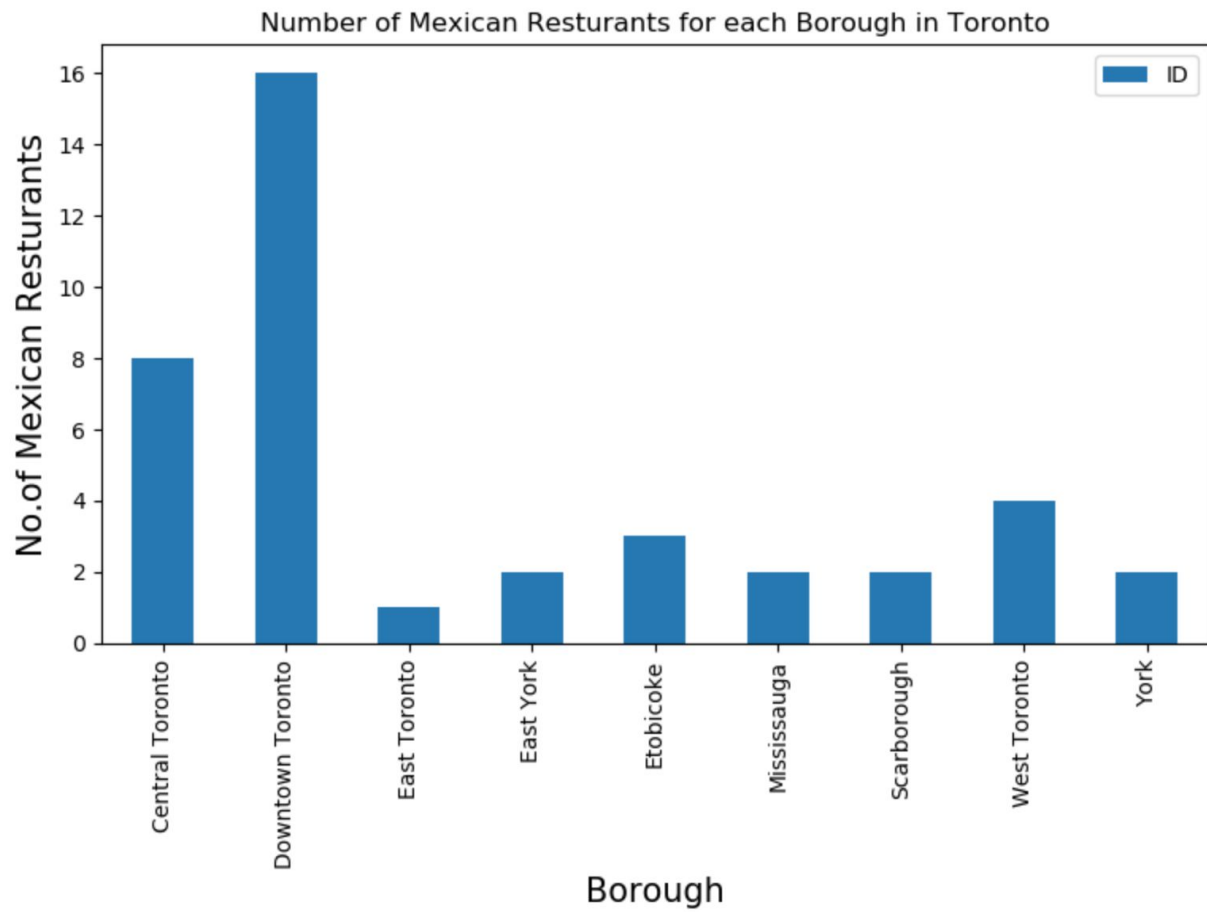
The information from Wikipedia and Foursquare will be investigated and analyzed by restaurants in Toronto. The eateries from the center of the city will be checked on in terms of the sorts of categories of eateries inside a particular radius. The information will be utilized to come up with a recurrence examination for a Mexican restaurant in Toronto and to come up with the most accurate choices of neighborhoods for the client.

3. Methodology

1. Scraping data from wikipedia
2. Getting the coordinates of the target place.
3. Getting the list of neighborhoods and their coordinates.
4. Eliminating some of the boroughs.
5. Exploring the most visited venues in the target localities.
6. Clustering the localities with k-mean algorithm.
7. Analyzing the clusters formed.

4. Results

4.1 Elimination of Boroughs that have already Mexican Restaurants

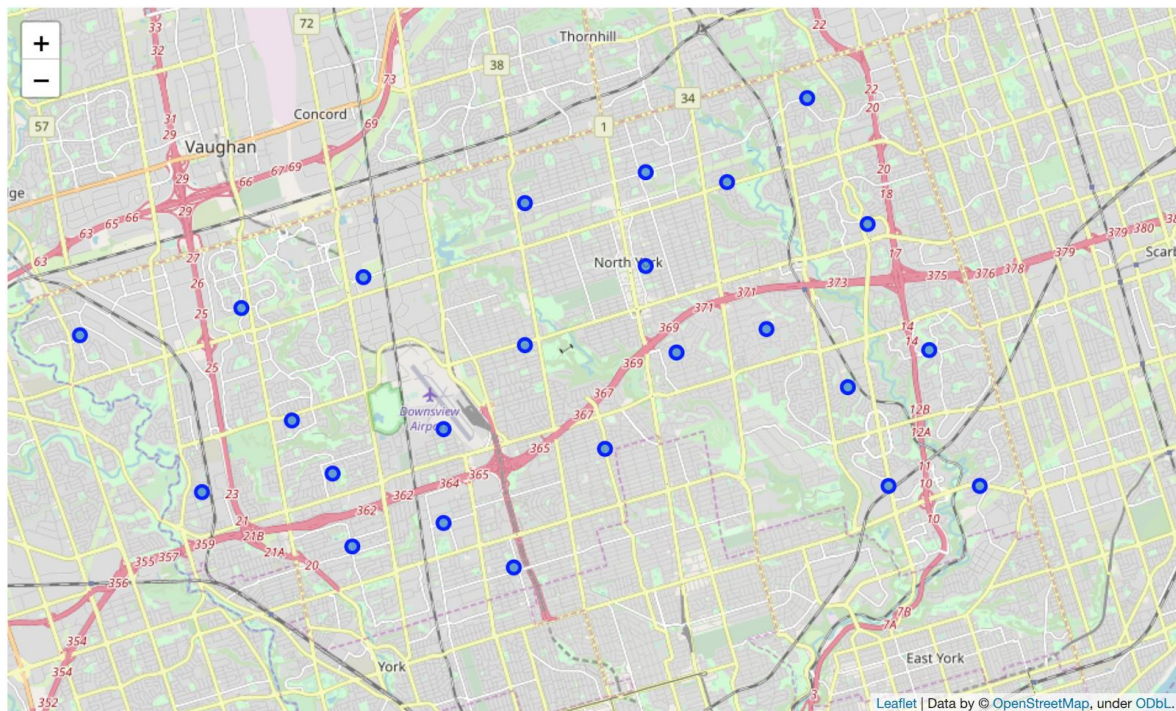


4.2 Scraping data from wikipedia to choose Borough that has a large number of Latin American minorities and does not have Mexican Restaurant in the area.

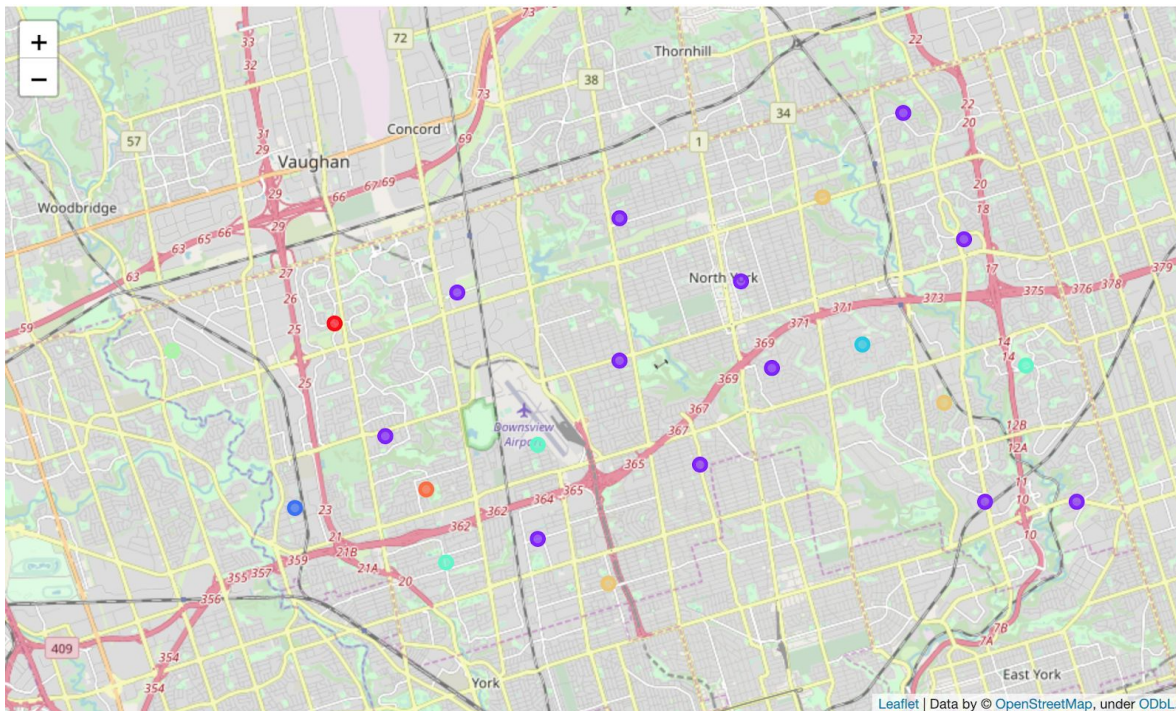
Ethnic groups in North York (2016)		Population	%
Source: 2016 Canadian Census ^[10]			
Ethnic origins	European	349,150	40.6%
	East Asian	123,280	14.3%
	Southeast Asian	85,115	9.9%
	Black	84,415	9.8%
	South Asian	75,995	8.8%
	Middle Eastern	49,060	5.7%
	Latin American	35,840	4.2%
	Aboriginal	7,035	0.8%
	Other	4,165	0.5%
Total population		869,401	100%

Visible minority and Aboriginal population ^{[30][31][32]}						
Population group ↕		Population (2016) ↕	% of total population (2016) ↕	Population (2011) ↕	% of total population (2011) ↕	Population (2006) ↕
European (White)		1,282,750	47.7%	1,292,365	50.2%	1,300,330
Visible minority group	South Asian	338,965	12.6%	317,100	12.3%	298,370
	Chinese	299,460	11.1%	278,390	10.8%	283,075
	Black	239,850	8.9%	218,160	8.5%	208,555
	Filipino	152,715	5.7%	132,445	5.1%	102,555
	Latin American	77,160	2.9%	71,205	2.8%	64,855
	Arab	36,030	1.3%	28,920	1.1%	22,485
	Southeast Asian	41,645	1.5%	46,825	1.8%	37,495
	West Asian	60,325	2.2%	50,235	2%	42,755
	Korean	41,640	1.5%	37,225	1.4%	34,220
	Japanese	13,410	0.5%	12,315	0.5%	11,965
	Visible minority, n.i.e.	36,975	1.4%	33,670	1.3%	25,195
	Multiple visible minorities	47,675	1.8%	37,920	1.5%	31,100
Total visible minority population		1,385,850	51.5%	1,264,395	49.1%	1,162,630
Aboriginal group	First Nations	14,380	0.5%	12,990	0.5%	9,130
	Métis	7,270	0.3%	4,875	0.2%	3,650
	Inuit	275	0%	305	0%	195
	Aboriginal, n.i.e.	645	0%	920	0%	485
	Multiple Aboriginal identities	500	0%	180	0%	145
Total Aboriginal population		23,065	0.9%	19,265	0.7%	13,605
Total population		2,691,665	100%	2,576,025	100%	2,476,565

4.2 Choosing North York as brought that have half of population of Latin America minority and no Mexican Restaurant in Area



4.3 Clustering with use of k-means methodology to divide it into 7 groups with similar properties.



5. Discussion

```
#1st Cluster
north_york_2.loc[north_york_2['Cluster Labels'] == 0, north_york_2.columns[[2] + list(range(6, north_york_2.shape[1]))]]
```

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	11th Most Common Venue	12th Most Common Venue	13th Most Common Venue
15	Downsview Northwest	Coffee Shop	Grocery Store	Athletics & Sports	Liquor Store	Discount Store	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store	Dim Sum Restaurant

```
#2nd Cluster
north_york_2.loc[north_york_2['Cluster Labels'] == 1, north_york_2.columns[[2] + list(range(6, north_york_2.shape[1]))]]
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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	11th Most Common Venue
0	Hillcrest Village	Golf Course	Athletics & Sports	Pool	Mediterranean Restaurant	Dog Run	Food Truck	Fried Chicken Joint	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Furniture Home Store
1	Henry Farm, Oriole, Fairview	Clothing Store	Coffee Shop	Fast Food Restaurant	Women's Store	Juice Bar	Toy / Game Store	Bakery	Japanese Restaurant	Food Court	Convenience Store	Liquor Store
4	Willowdale South	Ramen Restaurant	Pizza Place	Sandwich Place	Shopping Mall	Restaurant	Coffee Shop	Café	Sushi Restaurant	Middle Eastern Restaurant	Indonesian Restaurant	Movie Theater
5	York Mills West	Park	Convenience Store	Bank	Women's Store	Discount Store	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Cosmetics Shop	Deli / Bodega	Department Store
6	Willowdale West	Pharmacy	Bank	Pizza Place	Butcher	Discount Store	Coffee Shop	Grocery Store	Food Court	Department Store	Frozen Yogurt Shop	Comfort Food Restaurant
9	Flemingdon Park, Don Mills South	Coffee Shop	Beer Store	Asian Restaurant	Gym	Restaurant	Clothing Store	Concert Hall	Chinese Restaurant	Japanese Restaurant	Italian Restaurant	Dim Sum Restaurant
10	Wilson Heights, Downsview North, Bathurst Manor	Coffee Shop	Diner	Deli / Bodega	Ice Cream Shop	Bridal Shop	Pizza Place	Restaurant	Pharmacy	Sandwich Place	Convenience Store	Shopping Mall
11	University, Northwood Park	Furniture / Home Store	Caribbean Restaurant	Miscellaneous Shop	Massage Studio	Bar	Coffee Shop	Diner	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop
13	Downsview West	Grocery Store	Park	Hotel	Bank	Discount Store	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Department Store
16	Victoria Village	Coffee Shop	Portuguese Restaurant	Hockey Arena	Intersection	Discount Store	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Department Store
17	Lawrence Manor East, Bedford Park	Sandwich Place	Italian Restaurant	Coffee Shop	Restaurant	Greek Restaurant	Comfort Food Restaurant	Pizza Place	Pharmacy	Butcher	Café	Liquor Store
18	Lawrence Manor, Lawrence Heights	Clothing Store	Furniture / Home Store	Boutique	Vietnamese Restaurant	Event Space	Miscellaneous Shop	Coffee Shop	Shoe Store	Accessories Store	Bar	Electronics Store

#3rd Cluster

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north_york_2.loc[north_york_2['Cluster Labels'] == 2, north_york_2.columns[[2] + list(range(6, north_york_2.shape[1]))]]
```

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	11th Most Common Venue	12th Most Common Venue	13th Most Common Venue
22	Humberlea, Emery	Baseball Field	Women's Store	Dog Run	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store	Dim Sum Restaurant	Diner	Discount Store

#4th Cluster

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north_york_2.loc[north_york_2['Cluster Labels'] == 3, north_york_2.columns[[2] + list(range(6, north_york_2.shape[1]))]]
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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	11th Most Common Venue	12th Most Common Venue	13th Most Common Venue
3	Silver Hills, York Mills	Cafeteria	Women's Store	Discount Store	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store	Dim Sum Restaurant	Diner	Dog Run

#5th Cluster

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north_york_2.loc[north_york_2['Cluster Labels'] == 4, north_york_2.columns[[2] + list(range(6, north_york_2.shape[1]))]]
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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	11th Most Common Venue	12th Most Common Venue
7	Parkwoods	Park	Food & Drink Shop	Bus Stop	Women's Store	Diner	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store
12	Downsview East, CFB Toronto	Park	Airport	Playground	Diner	Coffee Shop	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store
20	Park, Downsview, Upwood Park	Park	Construction & Landscaping	Bakery	Women's Store	Discount Store	Comfort Food Restaurant	Concert Hall	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store	Dim Sum Restaurant

#6th Cluster

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north_york_2.loc[north_york_2['Cluster Labels'] == 5, north_york_2.columns[[2] + list(range(6, north_york_2.shape[1]))]]
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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	11th Most Common Venue	12th Most Common Venue	13th Most Common Venue
21	Humber Summit	Pizza Place	Empanada Restaurant	Discount Store	Coffee Shop	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store	Dim Sum Restaurant	Diner

#7th Cluster

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north_york_2.loc[north_york_2['Cluster Labels'] == 6, north_york_2.columns[[2] + list(range(6, north_york_2.shape[1]))]]
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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	11th Most Common Venue	12th Most Common Venue	13th Most Common Venue
2	Bayview Village	Japanese Restaurant	Chinese Restaurant	Café	Bank	Dog Run	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store	Dim Sum Restaurant	
8	Don Mills North	Caribbean Restaurant	Gym / Fitness Center	Café	Japanese Restaurant	Women's Store	Discount Store	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store	Diner
19	Glencairn	Japanese Restaurant	Asian Restaurant	Metro Station	Pub	Women's Store	Comfort Food Restaurant	Concert Hall	Construction & Landscaping	Convenience Store	Cosmetics Shop	Deli / Bodega	Department Store	Diner

After reviewing the data of each cluster, I have some discussions:

1. In **Cluster 1** most common venue is Coffee Shop and Grocery Shop so it is a good place to open restaurant

2. **Cluster 2** is very occupied with many different venues but not Mexican one. It may be a good place to open a restaurant, but it may need additional marketing activities to stand out. Recommended place.
3. **Clusters 3-6** have the potential to open a Mexican Restaurant, but it is quite clear that those areas aren't very focused on the restaurant market, so potential may be low.
4. **Clusters 7** is focused on Asia food so it may be a bad place for Mexican Restaurant as it may be a place where Asian minority lives

6. Conclusion

Taking into consideration results of analyze I would strongly recommend Humberlea and Emery Neighborhoods as a place to open Mexican Restaurant as this area:

1. Have many restaurants so this is the area where people are heading to eat.
2. Have no Mexican Restaurant open.
3. North York is a Borough of the Toronto Area where half of the population of Latin America minorities is living, which is a strong argument to set up Mexican Restaurant there.

