

Restaurants in Toronto and Lexington, KY

Where should
you go when
you're hungry?

Introduction

- People who live near Lexington, Kentucky often note that it seems to have a large number of restaurants for its population.
- Is this true?
- How does it compare to a much larger city?
 - Toronto has 2.7 million people
 - Lexington has 324,000 people
- How does the number of restaurants per capita compare?
- What kind of restaurants are present in each city?
- In short, is Lexington truly a 'restaurant town' or would a hungry person prefer a larger city like Toronto?

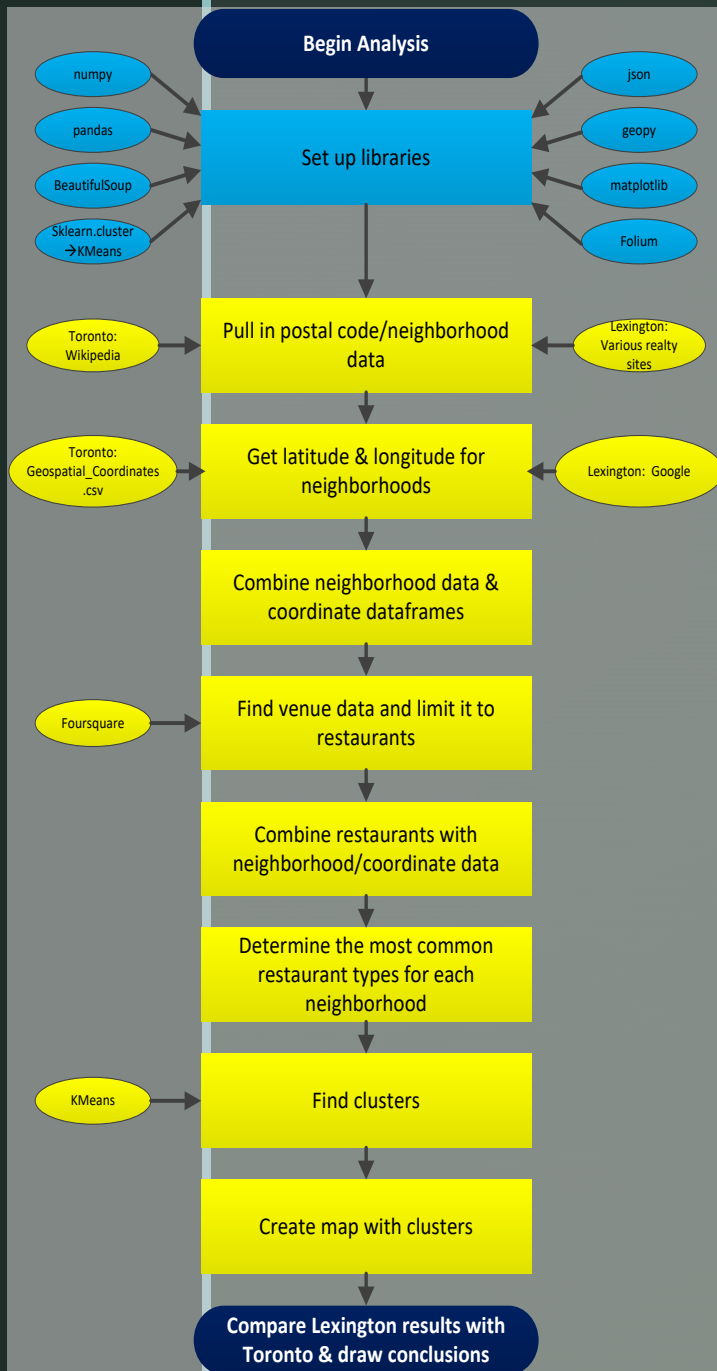
Who might be interested in this study?

- Entrepreneurs can see whether Lexington is a good place to start restaurants.
- Food tourists can understand if Lexington is worth a trip.
- Residents and leaders of both cities can learn more about this aspect of their city's culture.
- Are certain parts of Lexington particularly good for certain types of restaurants?
- Are there areas of town which lack a particular genre of food?

Where did we get the data?

- Population data is available on Wikipedia
- Neighborhood data for Toronto came from a .csv file in this assignment package
 - Lexington neighborhood data came from several realty websites
- The lists of restaurants by neighborhood was scraped from Foursquare.com

How was the project executed?



- Once the libraries were loaded, the analysis for each city was nearly identical
- I created dataframes containing zip codes, neighborhoods, geospatial coordinates, and restaurant data for each city
- These data were processed through K-Means clusters to identify logical groupings
- Finally, the reports for each city were compared

What different types of restaurants were found in Foursquare?

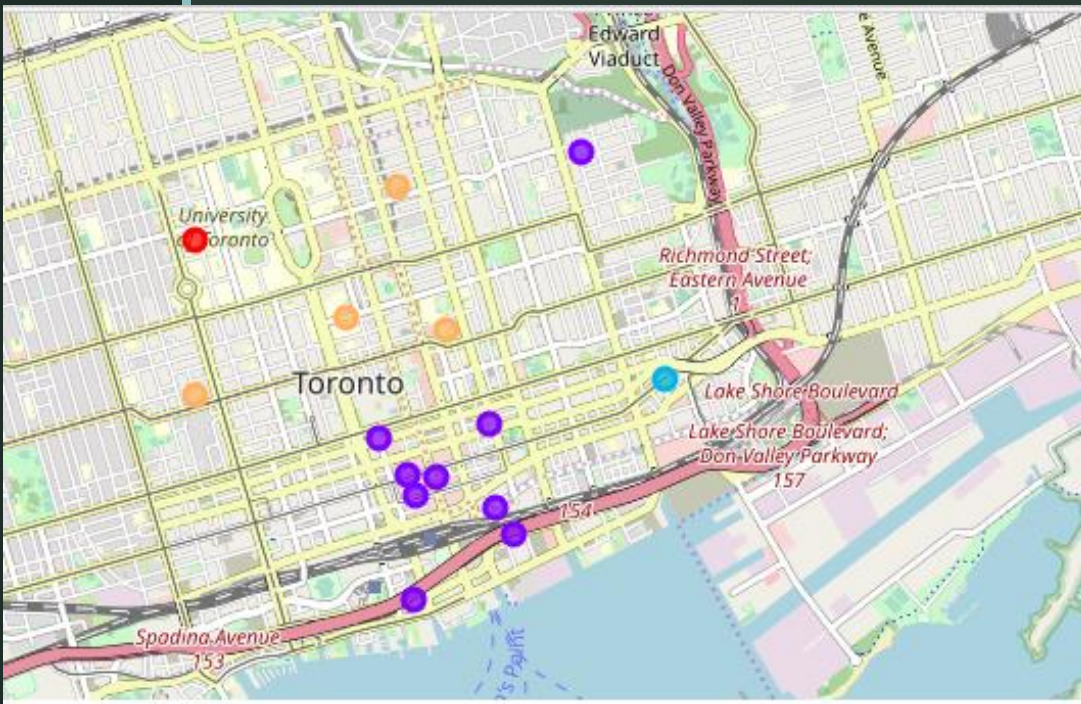
- The following restaurant types were found in Toronto

- ...and in Lexington

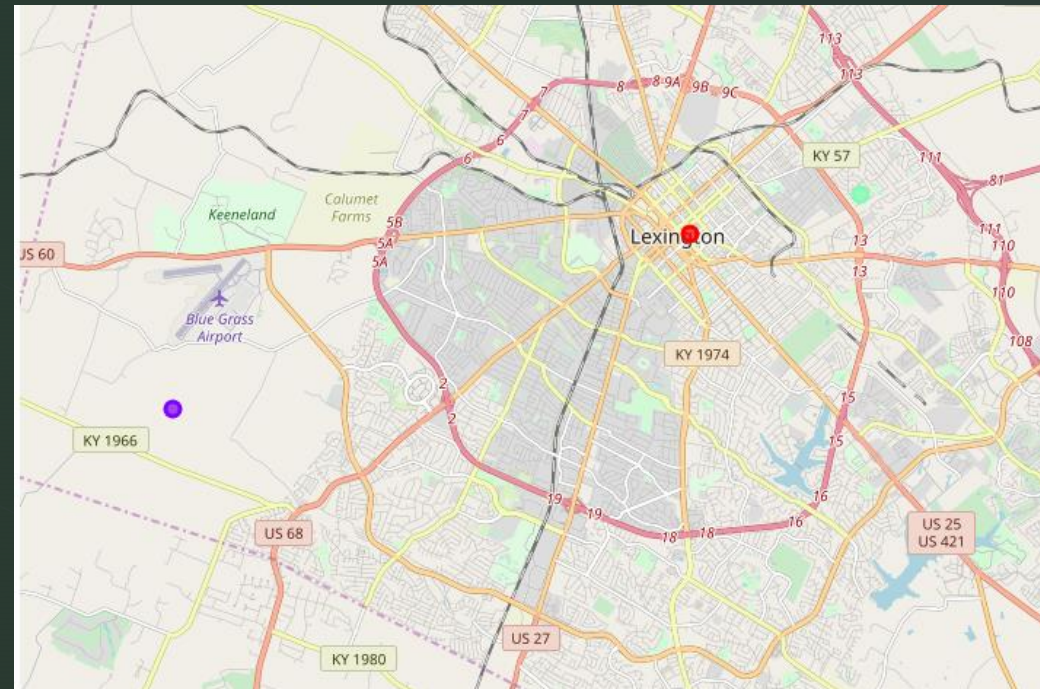
Afghan Restaurant	American Restaurant	Asian Restaurant	BBQ Joint
Bed & Breakfast	Belgian Restaurant	Brazilian Restaurant	Breakfast Spot
Burger Joint	Café	Caribbean Restaurant	Chinese Restaurant
Colombian Restaurant	Comfort Food Restaurant	Diner	Doner Restaurant
Dumpling Restaurant	Eastern European Restaurant	Empanada Restaurant	Ethiopian Restaurant
Falafel Restaurant	Fast Food Restaurant	Filipino Restaurant	French Restaurant
Fried Chicken Joint	Gaming Cafe	Gastropub	German Restaurant
Gluten-free Restaurant	Greek Restaurant	Hotpot Restaurant	Indian Restaurant
Italian Restaurant	Japanese Restaurant	Korean Restaurant	Latin American Restaurant
Mediterranean Restaurant	Mexican Restaurant	Middle Eastern Restaurant	Modern European Restaurant
Molecular Gastronomy Restaurant	New American Restaurant	Pizza Place	Polish Restaurant
Portuguese Restaurant	Ramen Restaurant	Restaurant	Sandwich Place
Seafood Restaurant	Sushi Restaurant	Taiwanese Restaurant	Thai Restaurant
Theme Restaurant	Vegetarian / Vegan Restaurant	Vietnamese Restaurant	Wings Joint

American Restaurant
Asian Restaurant
Breakfast Spot
Café
Diner
French Restaurant
Gastropub
Hot Dog Joint
Latin American Restaurant
Molecular Gastronomy Restaurant
Pizza Place
Restaurant
Sandwich Place
Vegetarian / Vegan Restaurant

Comparing the clusters in Toronto and Lexington



Toronto's clusters are generally defined by distance from the University of Toronto



Lexington has fewer clusters, so it is difficult to identify trends

NOTE: Foursquare was missing restaurant data for several Lexington neighborhoods

What types of restaurants are found in each cluster?

Neighbourhood	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
Harbourfront, Regent Park	Restaurant	Café	Mexican Restaurant	Asian Restaurant	French Restaurant	Breakfast Spot	Wings Joint	Doner Restaurant	Fried Chicken Joint	Filipino Restaurant
Ryerson, Garden District	Middle Eastern Restaurant	Japanese Restaurant	Café	Restaurant	Diner	Italian Restaurant	Pizza Place	Ramen Restaurant	Fast Food Restaurant	Sandwich Place
St. James Town	Restaurant	Café	Italian Restaurant	Diner	Breakfast Spot	American Restaurant	Thai Restaurant	Gastropub	BBQ Joint	Seafood Restaurant
Berczy Park	Restaurant	Seafood Restaurant	Café	Japanese Restaurant	Eastern European Restaurant	Breakfast Spot	Greek Restaurant	French Restaurant	BBQ Joint	Thai Restaurant
Central Bay Street	Italian Restaurant	Japanese Restaurant	Sandwich Place	Burger Joint	Café	Middle Eastern Restaurant	Chinese Restaurant	Thai Restaurant	Seafood Restaurant	Sushi Restaurant

Toronto tends to have general restaurants, cafes, and Japanese restaurants.

Several ethnic restaurants appear in the top 10 in each cluster.

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
Central Downtown	Vegetarian / Vegan Restaurant	Sandwich Place	Pizza Place	Molecular Gastronomy Restaurant	Latin American Restaurant	Hot Dog Joint	Gastropub	French Restaurant	Diner	Café
Eastland	Restaurant	Vegetarian / Vegan Restaurant	Sandwich Place	Pizza Place	Molecular Gastronomy Restaurant	Latin American Restaurant	Hot Dog Joint	Gastropub	French Restaurant	Diner
Southern Park	Diner	Vegetarian / Vegan Restaurant	Sandwich Place	Restaurant	Pizza Place	Molecular Gastronomy Restaurant	Latin American Restaurant	Hot Dog Joint	Gastropub	French Restaurant

Lexington has several vegetarian/vegan options and sandwich places

Only a few ethnic restaurants make the top 10

Conclusions

- Does Lexington have more restaurants than would be expected from a city its size?
 - Toronto has 479 restaurants listed in Foursquare
 - Lexington has 49
 - Since Toronto is 9.1 times the size of Lexington, this is a comparable number per capita
- However, Toronto has many more types of restaurants than Lexington
 - This is especially true for ethnic restaurants

Conclusions

- If you're a vegetarian, Lexington would be a good place to visit
 - Vegetarian restaurants were prominent in all clusters
- Pizza places were found in the top 10 for all Lexington clusters, but it was only in 5th place in the Southern Park neighborhood
 - Perhaps this would be a good place to start a pizzeria!

Recommendations for future study

- Lexington and Toronto are different in many ways
- How does Lexington compare to cities which are more similar?
 - It would be interesting to study cities of similar size
 - Is Lexington more in line with other cities in the US?
 - Is Lexington more similar to southern US cities?