

A nighttime photograph of a cityscape. In the foreground, a multi-lane highway interchange is visible, with light trails from cars creating streaks of white and red. The highway is illuminated by streetlights. In the background, a dense residential area with many apartment buildings is visible, their windows glowing with light. The sky is dark, and the overall scene is lit by the city's artificial lights.

# where is a new restaurant good location in Toronto?

Final project of coursera

szx4008

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## introduction

Background  
problem

## A virtual event

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Our boss wants to expend his restaurant business to Toronto.  
determine the best place to open a new restaurant

because of the covid-19, it is hard to do field trip.  
doing research with online database.  
use limited data to generate a reliable conclusion.



/02

## Data section

Data sources

Feature selection

# Data

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**Data sources:** Foursquare.

The world's top companies and more than 150,000 registered developers rely on Foursquare to power geo-tagging, venue search and more in their apps. The Places API offers real-time access to Foursquare's global database of rich venue data and user content to power your location-based experiences in your app or website. With Places Database, we can access precise, up-to-date community-sourced venue data. The large selection of rich and firmographic location data unlocks the potential to enhance our report with the ability to describe locations, analyze trends.

**Analysis method:** map visualization and frequency data

Map visualization can help us find the range of good location for restaurant. Frequency data can help us find which type of restaurant is the favorite of the local.

The variables we focus on are Neighborhood and Venue Category. We want to understand the connection between two variables and perform quantitative statistical analysis between them.





/03

## Methodology

The way we analysis

# Theory

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**agglomeration effect:** refers to the economic effect produced by the spatial concentration of various industries and economic activities and the centripetal force that attracts economic activities to a certain area, which is the basic factor leading to the formation and continuous expansion of cities.

The agglomeration effect is a common economic phenomenon, such as the agglomeration effect of industries.

The most typical example is the US Silicon Valley, where dozens of global IT giants and countless small and medium high-tech companies have gathered.

In Zhejiang, industries such as small household appliances, shoemaking, clothing, button making, and lighters are all concentrated in specific areas, forming a regionally concentrated manufacturing layout.

The catering industry is likely to follow this trend. Human flow is a limited resource. This resource is often concentrated in urban areas where the catering industry is developed.



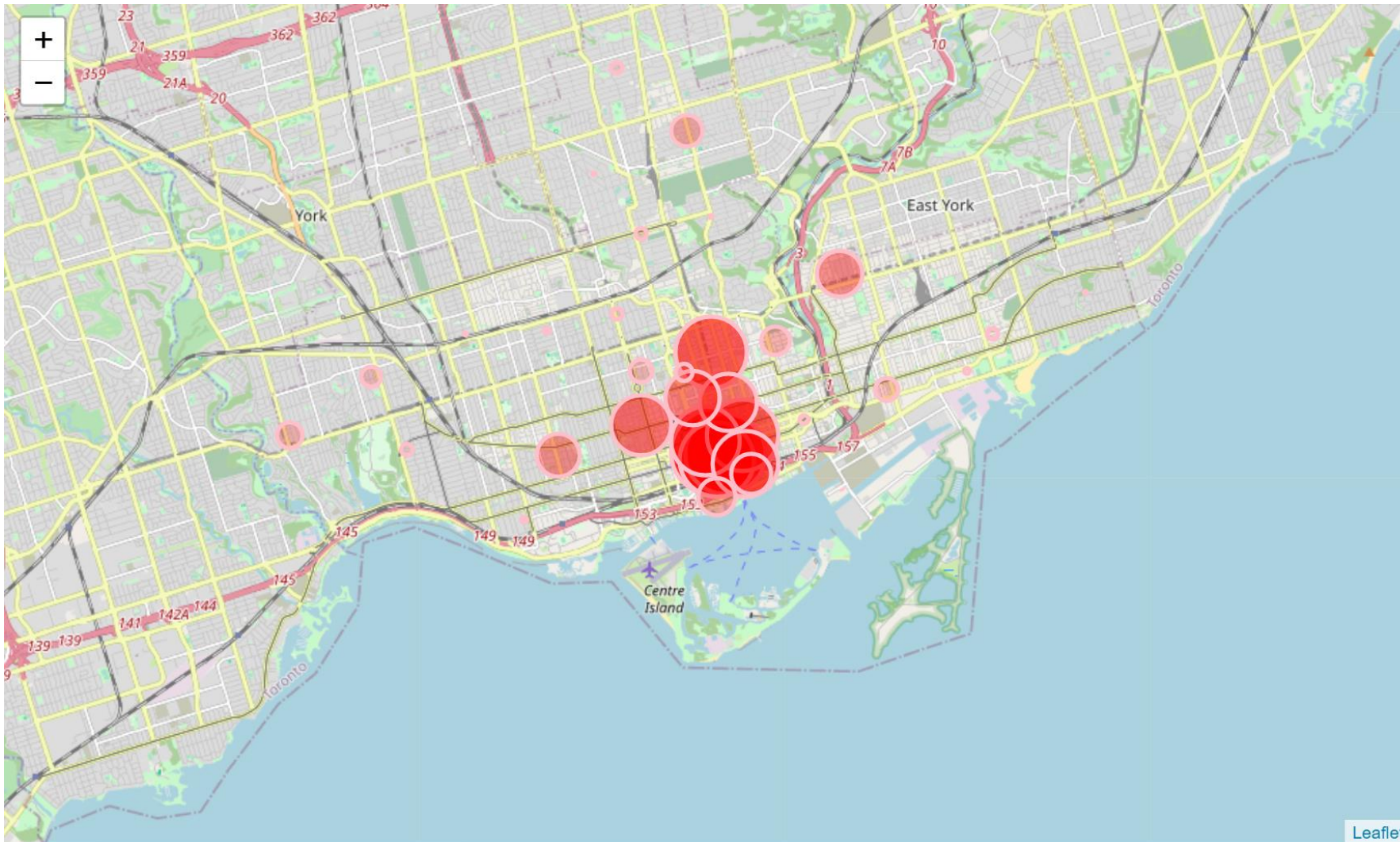
# Analysis process



We need to find the area where the restaurant gathers and determine the most suitable location through the clustering effect. By marking all the restaurants in Toronto on the map, we can intuitively find that most of the restaurants are concentrated in the southeast of the city.



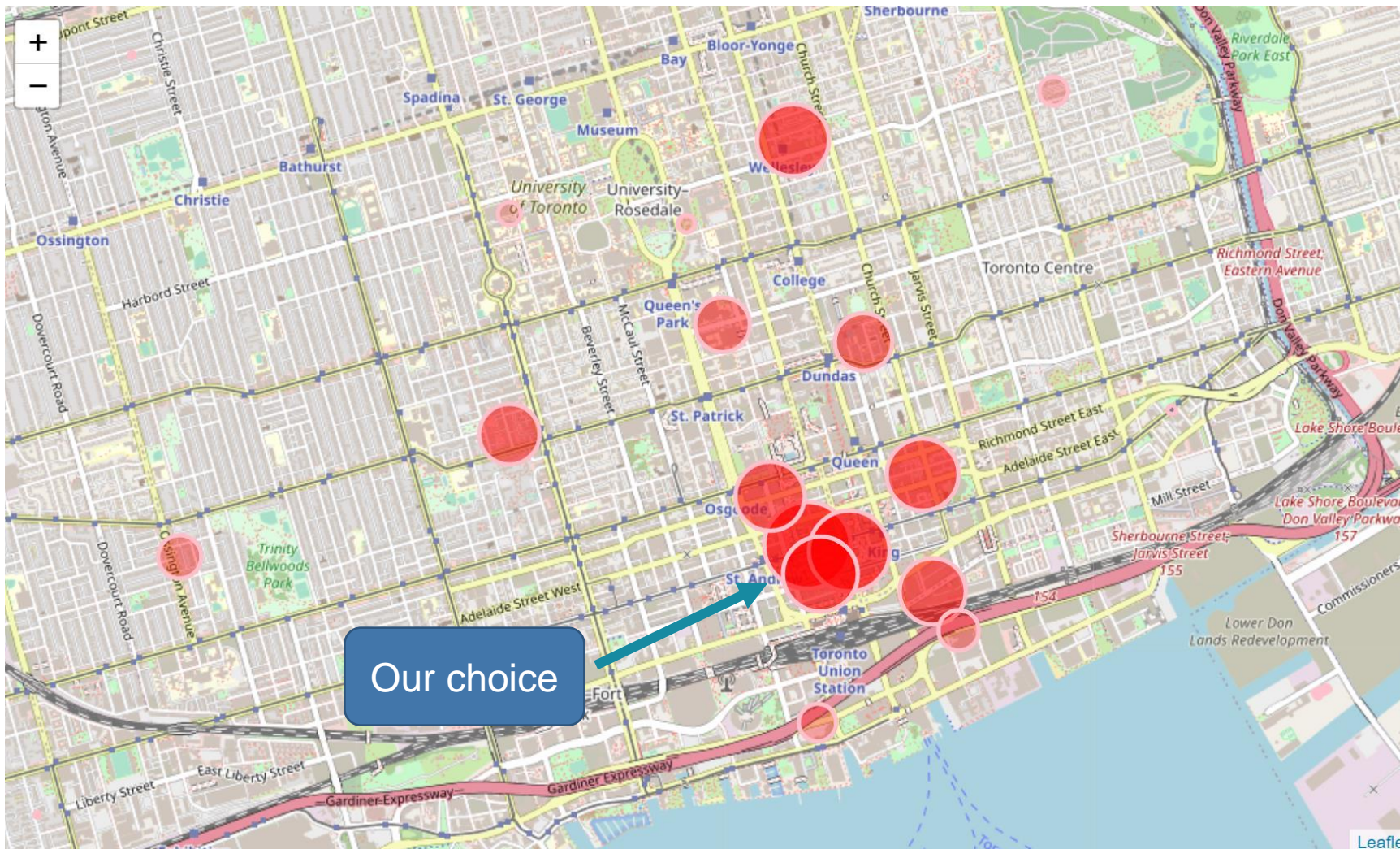
# Analysis process



If you use bubble graphics to label, the conclusion will be more obvious. The size and color depth of the red bubbles are positively correlated with the number of restaurants in the area. We can clearly see that the seaside south of Toronto is the most concentrated area of catering.



# Analysis process



If you zoom in on the graph, we can find that the restaurants are distributed near the university and across from Union Station. In order to simplify our analysis process, we only select the three most concentrated red circles as our analysis objects.

# Analysis process

Neighborhood	Venue Category
The top 10	'Restaurant(uncategorized)', 'Italian Restaurant', 'Japanese Restaurant', 'Sushi Restaurant', 'Seafood Restaurant', 'American Restaurant', 'Vegetarian / Vegan Restaurant', 'Thai Restaurant', 'Asian Restaurant', 'Greek Restaurant'
First Canadian Place, Underground city	'Japanese Restaurant', 'Restaurant', 'Asian Restaurant', 'Seafood Restaurant', 'American Restaurant', 'Sushi Restaurant', 'Colombian Restaurant', 'Italian Restaurant', 'Latin American Restaurant', 'Mediterranean Restaurant', 'Gluten-free Restaurant', 'Greek Restaurant', 'Vegetarian / Vegan Restaurant', 'Brazilian Restaurant', 'Fast Food Restaurant', 'Thai Restaurant', 'New American Restaurant'
Commerce Court, Victoria Hotel	'Restaurant', 'American Restaurant', 'Seafood Restaurant', 'Japanese Restaurant', 'Vegetarian / Vegan Restaurant', 'Italian Restaurant', 'Asian Restaurant', 'Latin American Restaurant', 'Thai Restaurant', 'Gluten-free Restaurant', 'French Restaurant', 'New American Restaurant'
Toronto Dominion Centre, Design Exchange	'Restaurant', 'Seafood Restaurant', 'Japanese Restaurant', 'American Restaurant', 'Italian Restaurant', 'Asian Restaurant', 'Sushi Restaurant', 'New American Restaurant', 'Greek Restaurant', 'Vegetarian / Vegan Restaurant', 'Fast Food Restaurant', 'Chinese Restaurant', 'French Restaurant', 'Gluten-free Restaurant'

we counted the ten most popular dining types in Toronto. Since these types of dining can be widely distributed, they must be loved by Toronto residents. We count the types of food and beverages that already exist in the three regions. If there are types of food that have not been opened, it will be a good choice for our new restaurant.



# Conclusion

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## **The good choice:**

Sushi Restaurant in Commerce Court, Victoria Hotel,  
Greek Restaurant in Commerce Court, Victoria Hotel,  
Thai Restaurant in Toronto Dominion Centre, Design Exchange.

If time is sufficient, it is necessary to analyze all areas separately. Can greatly improve the credibility and accuracy of the conclusion. There is a major problem in this report. The accuracy of the database is sufficient. There are many restaurants that are not classified, some are classified incorrectly, and some restaurants are of multiple types but are not distinguished. These all need time to resolve.

A nighttime photograph of a cityscape. In the foreground, a multi-lane bridge spans a body of water, with light trails from vehicles visible on its surface. The bridge is supported by several concrete pillars. In the background, a dense residential area with many apartment buildings is visible, their lights glowing against the dark sky. The water reflects the lights from the bridge and the city.

# Thanks!

Fin report of coursera  
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