

COUSERA CAPSTONE PROJECT - PRESENTATION

By Aruna Dorai



Project description

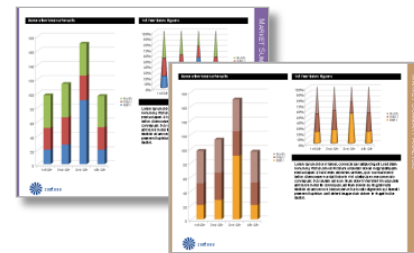
The Mayor of Mississauga, has floated a RFP for finalizing the location for an Italian restaurant in Port credit area.

They wanted analysis of the existing business and particular restaurants to ensure Italian restaurant would indeed be successful.

Aruna Dorai Inc was one of the shortlisted agencies to be invited to present a proposal to address this problem.

Aruna Dorai Inc was an acclaimed consulting agencies using Data science and Machine learning for all their projects. They have a proven track record of success. They keep up with the latest trends in Data and information management.

They have a proven process for informative problem solving.



Who can use this report ?

This report is specifically created for the Mississauga mayors office, however can be used by zoning officers or new small businesses trying to enter the market in the south Mississauga (Port Credit) neighborhood.

Mississauga neighborhood is one of the affluent communities with beautiful custom homes and manicured gardens. The demographic is mostly double income families and has discretionary amount for going to restaurants.

Sources	
1.	Mississauga population
2.	No of restaurants / 100,00 people in various cities
3.	Average Salary in various cities
4.	No of people working in a city
5.	Foursquare API data

:[1]:

	City	Figure	Per capita	Date	Source	Notes
0	Amsterdam	53.4	NaN	2013	Trade Association for Horeca and Catering	NaN
1	Austin	207.2	NaN	2018	Restaurant Guide - Austin Chronicle	NaN
2	Bogotá	418.6	NaN	2017	Cámara de Comercio de Bogotá	NaN
3	Brussels	360.4	NaN	2013	FOD Economie ADSEI	NaN
4	Buenos Aires	221.3	NaN	2016	FEHGRA	NaN

Data set 1

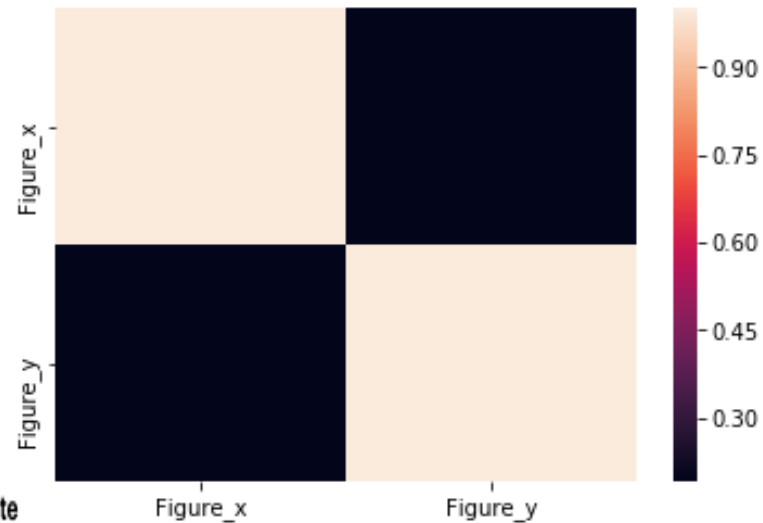
Toronto has 272 restaurants for every 100,000 people

Mean is 192 for 30 cities and we are above the average

Hypothesis 1

Is there correlation between no of people and average salary in the city?

Outcome



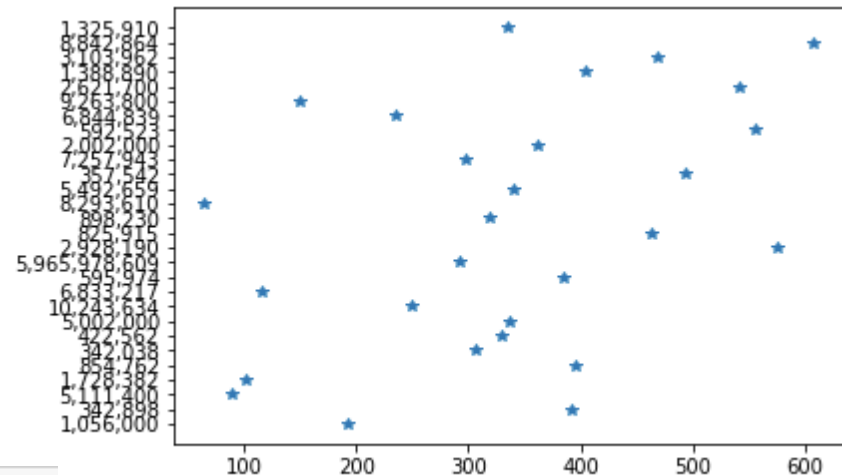
Out[60]:

	Figure_x	Figure_y	Figure	Per capita	Date
Figure_x	1.000000	0.191751	0.012733	NaN	0.213494
Figure_y	0.191751	1.000000	-0.056597	NaN	0.341108
Figure	0.012733	-0.056597	1.000000	NaN	0.003641
Per capita	NaN	NaN	NaN	NaN	NaN
Date	0.213494	0.341108	0.003641	NaN	1.000000

Hypothesis 2

Is there correlation between no of restaurants and No of working people in the city?

Outcome



```
In [64]: dfX.corr(method = 'spearman')
```

Out[64]:

	Figure_x	Figure_y	Figure
Figure_x	1.000000	0.093596	0.257252
Figure_y	0.093596	1.000000	-0.380405
Figure	0.257252	-0.380405	1.000000
Per capita	NaN	NaN	NaN
Date	0.114438	0.042697	-0.059252

Conclusion -

There is NO correlation between no of restaurants and
No of working people in the city.

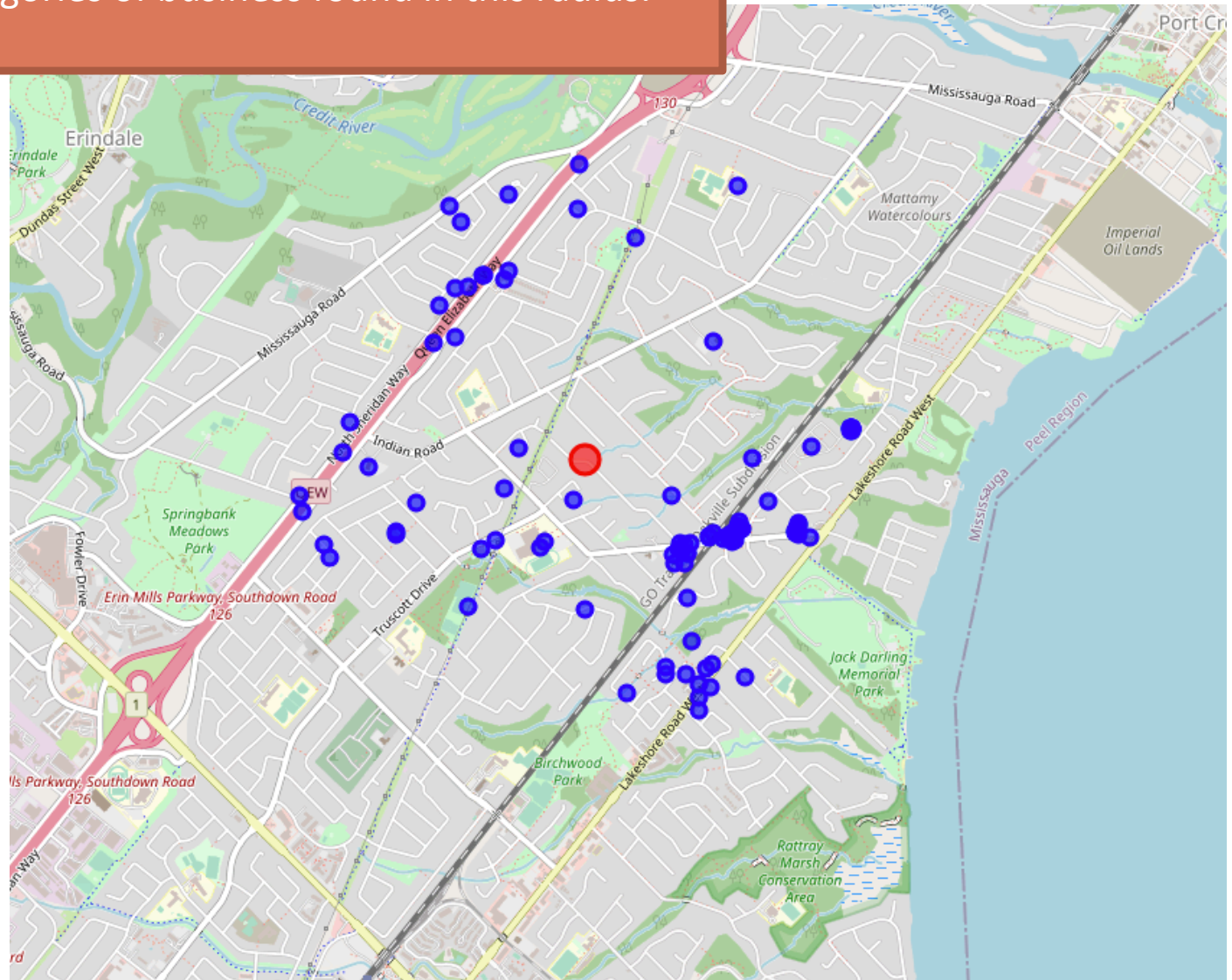
And no of restaurants and Average Salary in that city

Next Hypothesis -

Use Foursquare API to analyse the business and
Restaurants in the proposed site.

Validate if there is an Italian restaurant.

Red circle denotes – Proposed location for restaurant
Blue circle denotes small business around this address
Analyze the categories of business found in this radius.



```
In [21]: df.categories
```

```
Out[21]: 0      High School
1      Gym / Fitness Center
2      Storage Facility
3      Grocery Store
4      Tennis Court
5      None
6      High School
7      Jewelry Store
8      Pizza Place
9      Gas Station
10     None
11     Dentist's Office
12     Chinese Restaurant
13     None
14     None
15     School
16     College Classroom
17     None
18     None
19     None
20     None
21     Government Building
22     Sushi Restaurant
23     Gas Station
24     Automotive Shop
25     Music School
26     Parking
27     Professional & Other Places
28     Parking
29     Parking
30     Parking
31     Parking
32     Parking
33     Design Studio
34     School
35     Parking
36     Parking
37     Parking
38     Doctor's Office
39     Doctor's Office
40     Doctor's Office
41     Chinese Restaurant
```

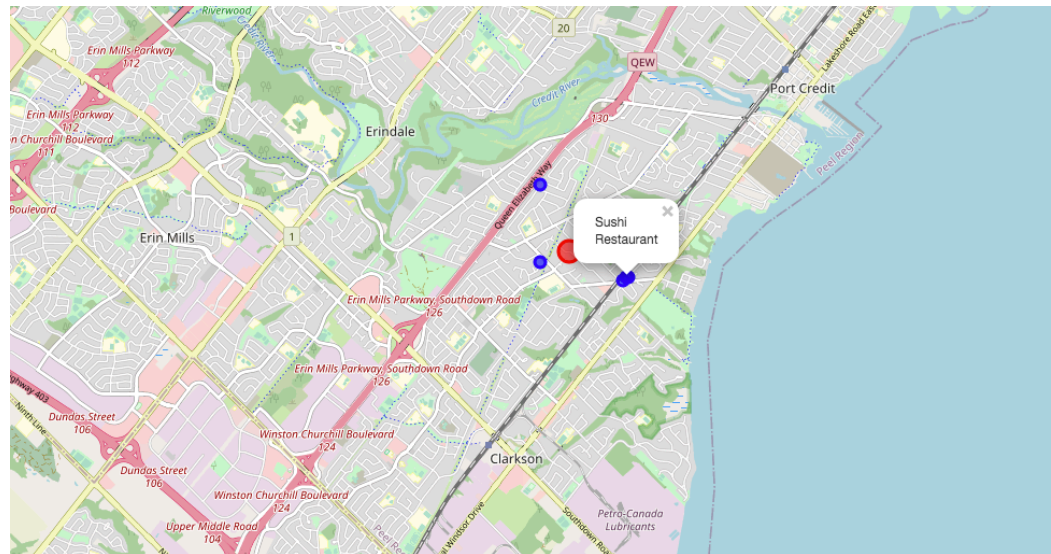
Categories found in the area -

Outcome

Filter and map dining areas -

Out[52]:

	name	address
categories		
Chinese Restaurant	Timjas Thai Chinese	17-1107 Lorne Park Rd
Sushi Restaurant	Ichiban Sushi House	NaN
Chinese Restaurant	James Wok	1107 Lorne Park Road



Conclusion

1. There is scope to add a restaurant
2. There is no Italian restaurant in the neighborhood

Recommendation to the Mayor -

Approve the proposed Italian restaurant in the south Mississauga neighborhood.

This report should be read along with the Jupyter notebook published on Github –

Publish on GitHub

The

[Capstone assignment on Foursquare API -part 2.ipynb](#) file
was published in the [arunado/Coursera-Capstone](#) repository.
Click [#2791965](#) to view the commit.