
Suggesting Restaurant Location

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Data Science Capstone Project – The Battle of Neighborhoods

I. INTRODUCTION

Vancouver is one of the most important cities in Canada. With the highest population density in Canada, Vancouver is also one of the most ethnically and linguistically diverse cities in the country. Having all the characteristics of a cosmopolitan city, including a great economy, Vancouver is an ideal place to open a new restaurant, in this case an authentic Mexican cuisine restaurant. Designated by UNESCO as a cultural treasure, traditional Mexican cuisine is one of the most popular cuisines in the world.

In order to be successful when starting a business, a very important aspect to consider is the physical location to settle in. Specifically, this report is oriented to make a recommendation, to a group of investors interested on supporting a business of a new authentic Mexican cuisine restaurant, on a convenient region (or regions) to establish this restaurant in Vancouver.

Foursquare services will be used to discover the main region o regions of interest in Vancouver for the investors to take a decision and recommendations will be highlighted according to the obtained results.

II. DATA

The data necessary to accomplish the project are the following:

1. Neighborhoods in Vancouver
 - a. Postal code
 - b. Neighborhood

This data will be obtained by scrapping the following Wikipedia page using Beautiful Soup:
https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_V

2. Latitude and longitude for each Neighborhood:

- a. Postal code
- b. Neighborhood
- c. Latitude
- d. Longitude

Latitude and longitude will be obtained using GeoPy (Python) library and using postal code as the argument.

At the end we will have a table like the one presented on Table 1.

Table 1

Postal Code	Neighborhood	Latitude	Longitude
V5K	Hastings-Sunrise	49.28196685	-123.0400039
V5L	Grandview-Woodland	49.27883935	-123.0668426
V5M	Hastings-Sunrise, Renfrew-Collingwood	49.25805275	-123.0401552
V5N	Grandview-Woodland, Kensington-Cedar Cottage	49.25345095	-123.066309
V5P	Kensington-Cedar Cottage, Victoria-Fraserview	49.22236995	-123.0683154
V5R	Renfrew-Collingwood	49.2400053	-123.0412036
V5S	Killarney	49.21567675	-123.041565
V5T	Mount Pleasant	49.261967	-123.0911945
V5V	Kensington-Cedar Cottage, Riley Park-Little Mountain	49.24763425	-123.0906046
V5W	Riley Park-Little Mountain, Kensington-Cedar Cottage, Oakridge, Sunset	49.2329609	-123.0912845
V5X	Oakridge, Marpole, Sunset	49.21517155	-123.0970026
V5Y	Mount Pleasant, Riley Park-Little Mountain	49.2512164	-123.1100756
V5Z	Fairview, South Cambie	49.25087085	-123.1213886
V6A	Strathcona, Chinatown, Downtown Eastside	49.2707128	-123.1007137
V6B	Downtown, Gastown, Harbour Centre, International Village, Victory Square, Yaletown	49.2747627	-123.1180934
V6C	Waterfront, Coal Harbour, Canada Place	49.28803365	-123.1147796
V6E	West End, Davie Village	49.2848351	-123.1262791
V6G	West End, Stanley Park	49.29972285	-123.1377908
V6H	Fairview, Granville Island, Shaughnessy	49.25774675	-123.1329205
V6J	Shaughnessy, Kitsilano, Quilchena	49.26256705	-123.1457577
V6K	Kitsilano, Greentown	49.26937685	-123.1650655
V6L	Arbutus Ridge, Dunbar-Southlands	49.2505265	-123.1658481
V6M	Shaughnessy, Oakridge, Kerrisdale, Arbutus Ridge	49.2378181	-123.1452847
V6N	Kerrisdale, Dunbar-Southlands, Musqueam	49.2379179	-123.1626348
V6P	Kerrisdale, Oakridge, Marpole	49.2260859	-123.1166419
V6R	Kitsilano, West Point Grey, Jericho	49.26740765	-123.1963317
V6T	UBC	49.2585106	-123.2266618
V6Z	Downtown	49.2780432	-123.1277779
V7X	Bentall Centre	49.2875369	-123.1203888
V7Y	Pacific Centre	49.28241235	-123.1192165

For simplicity, the neighborhoods with the same postal code are put together and there is a latitude and a longitude for each line.

With these previous dataset it would be possible to get Foursquare location data and make the analysis.

Foursquare will permit to get the main venues related to the listed postal codes, analyze the data and finally decide which regions would be convenient for our new authentic Mexican cuisine restaurant.