



Where are the restaurants in Montréal ?

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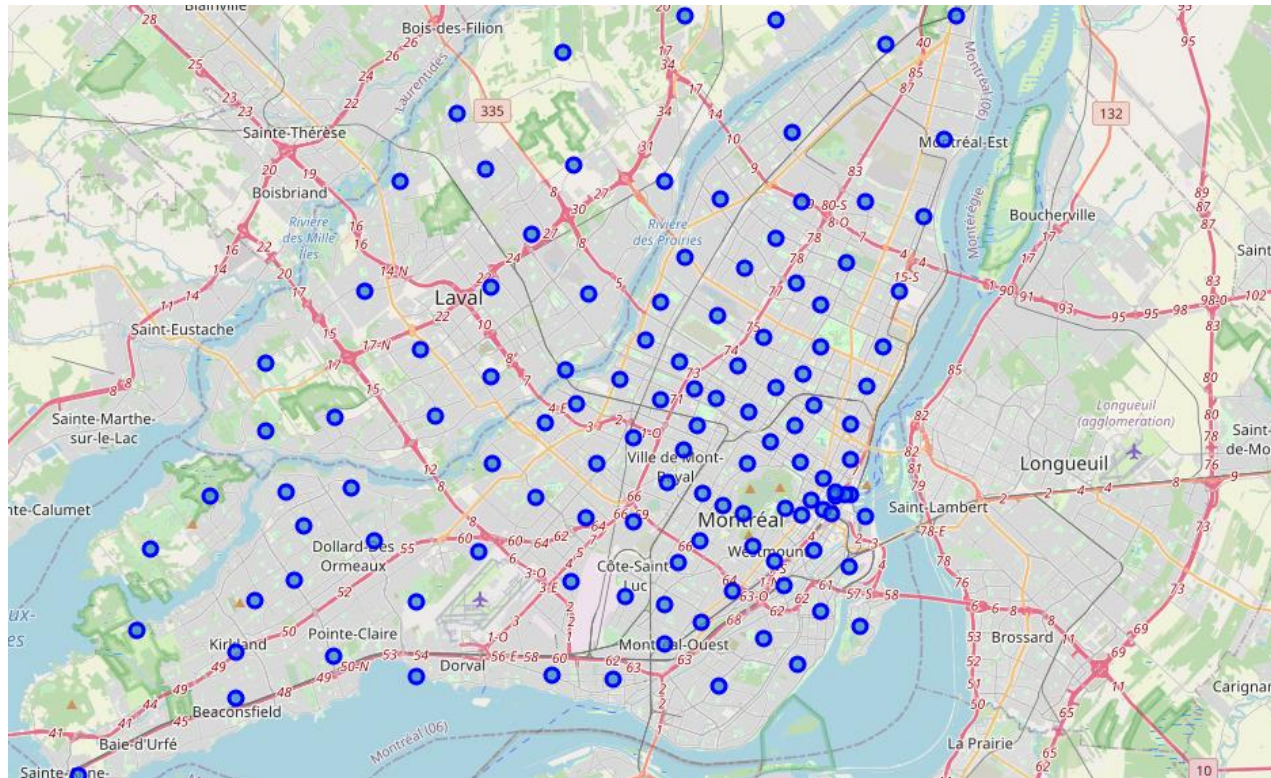
Introduction

- It may be hard to know where to go for a fun time in Montréal if you do not know the city
- Usually, the restaurants and the nightlife in a city are all in the same neighborhoods or streets
- The Foursquare API makes it possible to know which venues are close to a point of interest

Data acquisition

- Wikipedia has a list of postal codes in Montréal for each neighborhood
- A geolocator can give us the coordinates of a neighborhood if we pass the postal code in the query
- The Foursquare API can give us the venues around the coordinates of the neighborhoods

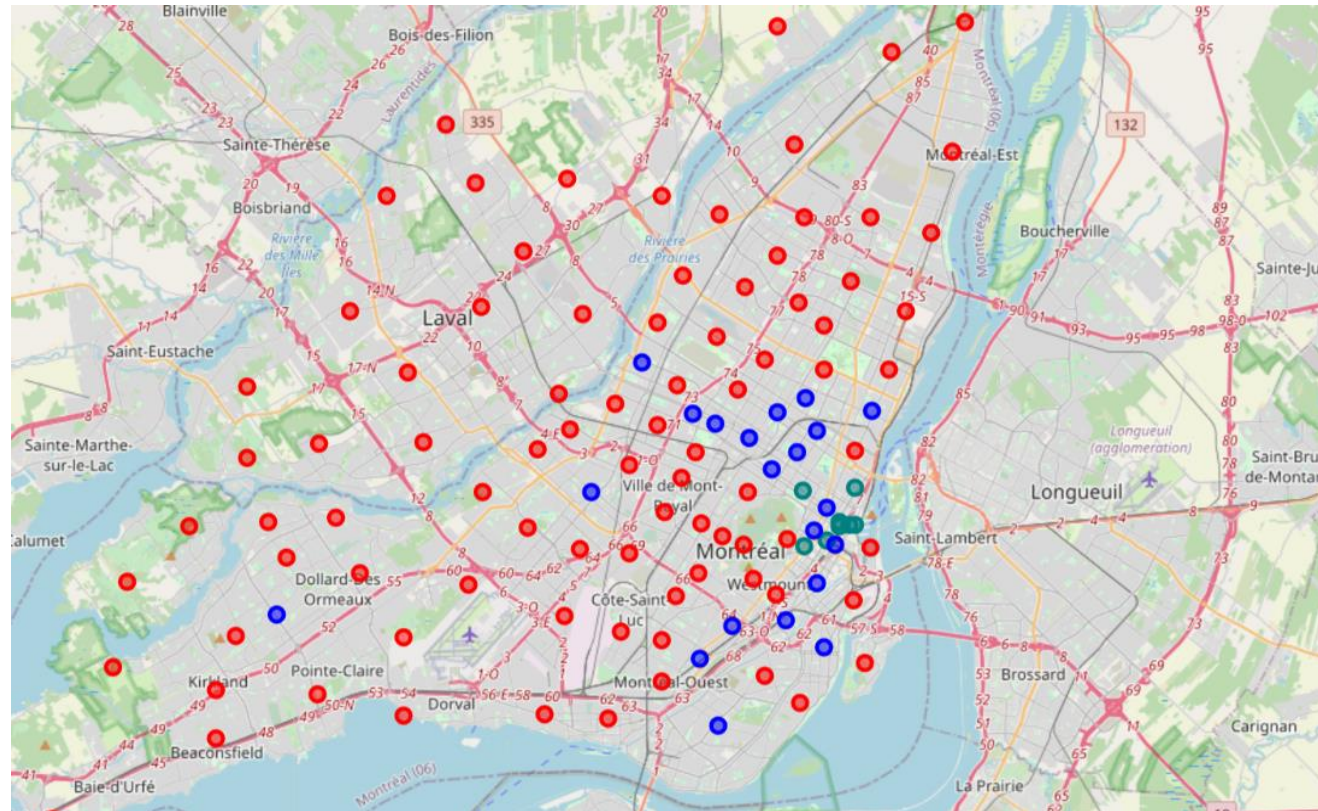
Map of Montréal and its neighborhoods



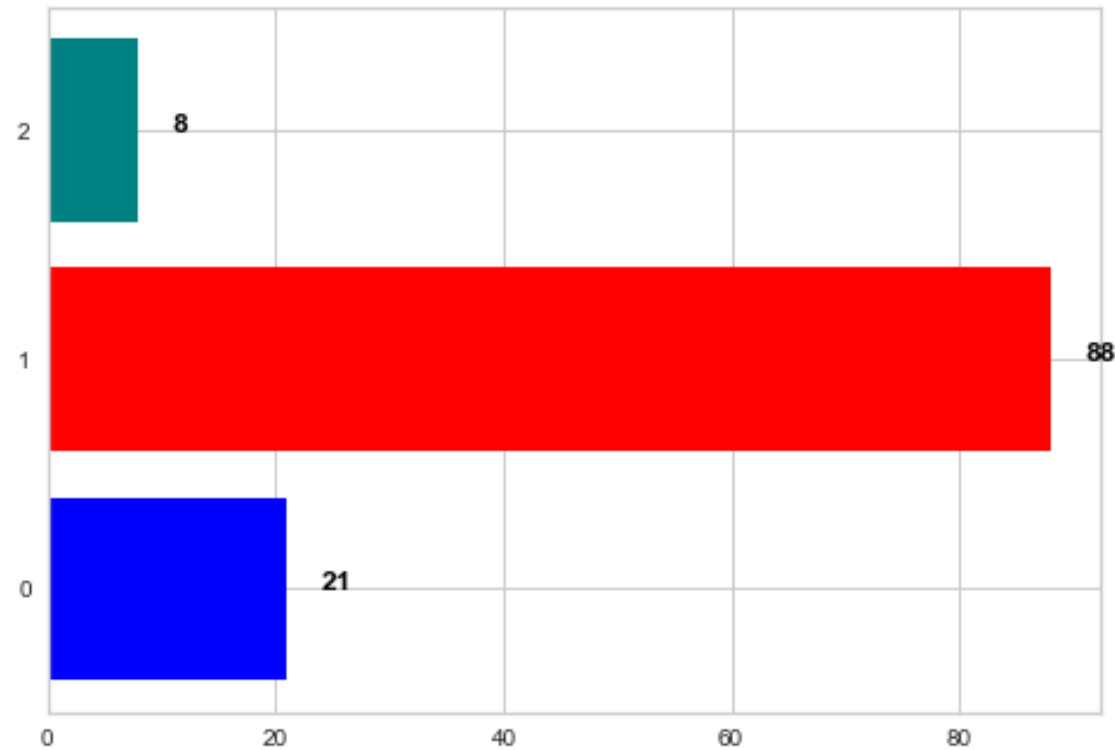
Clustering with KMeans

- Clustering the neighborhoods will allow us to group the neighborhoods according to the kind of venues in each one
- Kmeans is easy to use and gives great results
- I used the silhouette score to find the right amount of clusters
 - I could have chosen 3 or 6, but went with 3 to keep the result simple

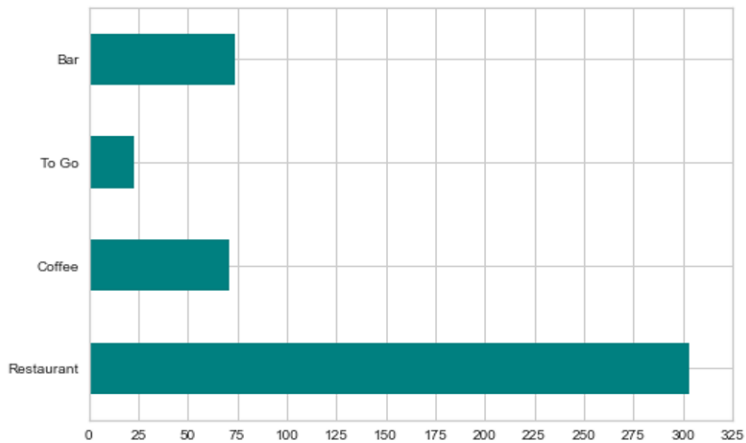
Map of Montréal and the clusters



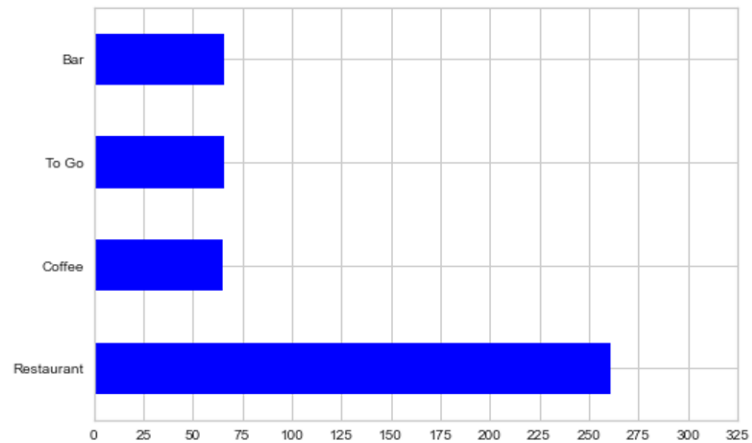
How many neighborhoods in each clusters



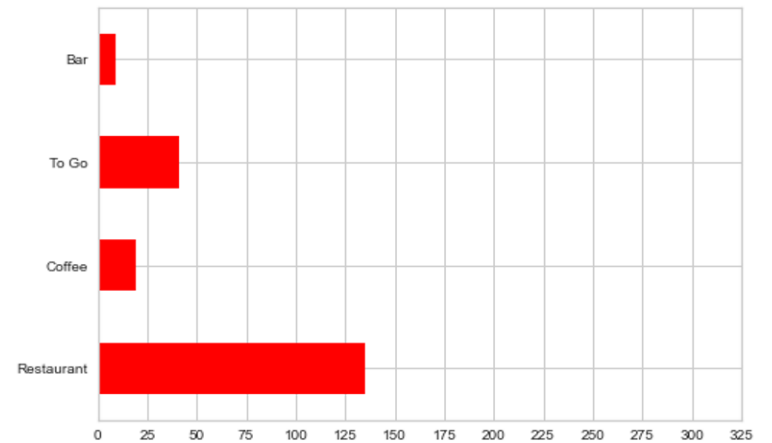
Where are the restaurants ?



8 neighborhoods



21 neighborhoods



88 neighborhoods

Conclusion

- A few neighborhoods have most of the restaurants and they are all very close to one another
- Here is the list :

	Restaurant	Coffee	To Go	Bar
Neighborhood				
Centre-Sud	25	9	3	15
Downtown Montreal	31	10	1	5
Downtown Montreal	47	7	2	6
Downtown Montreal (Concordia University)	37	9	3	13
Old Montreal	36	9	4	9
Place Desjardins	44	6	3	5
Plateau Mont-Royal Central	47	9	4	13
Tour de la Bourse	36	12	3	8

Some neighborhoods are on the list more than once, because of their size.