Battle Of the cities Toronto and Montreal Canada

Problem Statement

My family and I would like to go to Canada. We are justifying which city to choose from. Would it be Toronto, Canada or Montreal Canada. We need to see the similarities and disimilarities of both cities. We will get to see the most common venues for both

Project Background

Toronto and Montreal are two distinct flavor Canadian cities. Toronto is a financial capital of Canada and may be a modern city and Montreal is seen as more historic, cultural and Europe-leaning, particularly in regard to its French roots. As a data Scientist, we will see both of the cities venues.

Objective

Perform analysis on two cities Toronto and montreal Canada using Foursquare API and determine which city to visit for vacation.

Methods

- Loading the Wikipedia website from both Toronto and Montreal Canada
- Using geolocator and geographical coordinates to load the postal codes
- Had to type in a csv file for the postal codes with Neighborhoods for Montreal Canada
- Using beautiful soup to web scrape data from both Wikipedia sites of Toronto and Montreal Canada

Results

This is the result of the Toronto DataFrame

- 1 Toronto_data = pd.merge(df1, df2, on="PostalCode")
- 2 Toronto_data

| | PostalCode | Borough | | Neighborhood | Latitude | Longitude |
|----|------------|------------------|-----------------|---------------------------------|-----------|------------|
| 0 | МЗА | North York | | Parkwoods | 43.753259 | -79.329656 |
| 1 | M4A | North York | | Victoria Village | 43.725882 | -79.315572 |
| 2 | M5A | Downtown Toronto | • | Regent Park, Harbourfront | 43.654260 | -79.360636 |
| 3 | M6A | North York | La | awrence Manor, Lawrence Heights | 43.718518 | -79.464763 |
| 4 | M7A | Queen's Park | | Ontario Provincial Government | 43.662301 | -79.389494 |
| 5 | M9A | Etobicoke | | Islington Avenue | 43.667856 | -79.532242 |
| 6 | M1B | Scarborough | | Malvern, Rouge | 43.806686 | -79.194353 |
| 7 | МЗВ | North York | | Don Mills North | 43.745906 | -79.352188 |
| 8 | M4B | East York | | Parkview Hill, Woodbine Gardens | 43.706397 | -79.309937 |
| 9 | M5B | Downtown Toronto | | Garden District, Ryerson | 43.657162 | -79.378937 |
| 10 | M6B | North York | | Glencairn | 43.709577 | -79.445073 |
| 11 | M9B | Ftobicoke | West Deane Park | Princess Gardens Martin Grov | 43 650943 | -79 554724 |

Results

This is the result of the Montreal DataFrame

Out[17]:

| | PostalCode | Borough | Neighborhood | Latitude | Longitude |
|----|------------|-------------------------------|-------------------------------|----------|-----------|
| 0 | H1A | Pointe-aux-Trembles | Pointe-Aux-Trembles | 45.67 | -73.50 |
| 1 | H2A | Saint-Michel district, Quebec | Saint-Michel East | 45.44 | -75.64 |
| 2 | Н3А | Downtown Montreal | Downtown Montreal North | 45.44 | -75.64 |
| 3 | H4A | McGill University | McGill University | 45.44 | -75.64 |
| 4 | H5A | Notre-Dame-de-Grâce, Quebec | Notre-Dame-de-Grâce Northeast | 45.44 | -75.64 |
| 5 | H7A | Place Bonaventure | Place Bonaventure | 45.44 | -75.64 |
| 6 | H9A | Duvernay-Est, Quebec | Duvernay-Est | 45.44 | -75.64 |
| 7 | H1B | Dollard-des-Ormeaux | Ormeaux Northwest | 45.65 | -73.51 |
| 8 | H2B | Montreal East, Quebec | Montreal East | 44.42 | -80.10 |
| 9 | H3B | Ahuntsic, Quebec | Ahuntsic North | 44.42 | -80.10 |
| 10 | H4B | Downtown Montreal | Downtown Montreal East | 44.42 | -80.10 |
| 11 | H5B | Notre-Dame-de-Grâce, Quebec | Notre-Dame-de-Grâce Southwest | 44.42 | -80.10 |

Results Toronto, Canada

Printing the ten most common venues of Toronto, Canada

| | 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 |
|---|---|-----------------------------|-----------------------------|---------------------------------|-----------------------------|-----------------------------|----------------------------------|---------------------------------------|----------------------------------|---------------------------------|------------------------------|
| 0 | Agincourt | Lounge | Breakfast Spot | Latin American Restaurant | Skating Rink | Metro Station | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant |
| 1 | Alderwood, Long Branch | Pizza Place | Coffee Shop | Gym | Sandwich Place | Skating Rink | Pub | Mexican Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop |
| 2 | Bathurst Manor, Wilson Heights, Downsview North | Bank | Coffee Shop | Restaurant | Ice Cream Shop | Supermarket | Fried Chicken Joint | Chinese Restaurant | Bridal Shop | Gas Station | Diner |
| 3 | Bayview Village | Café | Japanese Restaurant | Bank | Chinese Restaurant | Yoga Studio | Monument / Landmark | Molecular Gastronomy Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop |
| 4 | Bedford Park, Lawrence Manor East | Italian Restaurant | Hobby Shop | Coffee Shop | Sandwich Place | Breakfast Spot | Juice Bar | Sushi Restaurant | Japanese Restaurant | Liquor Store | Pub |

Results Montreal, Canada

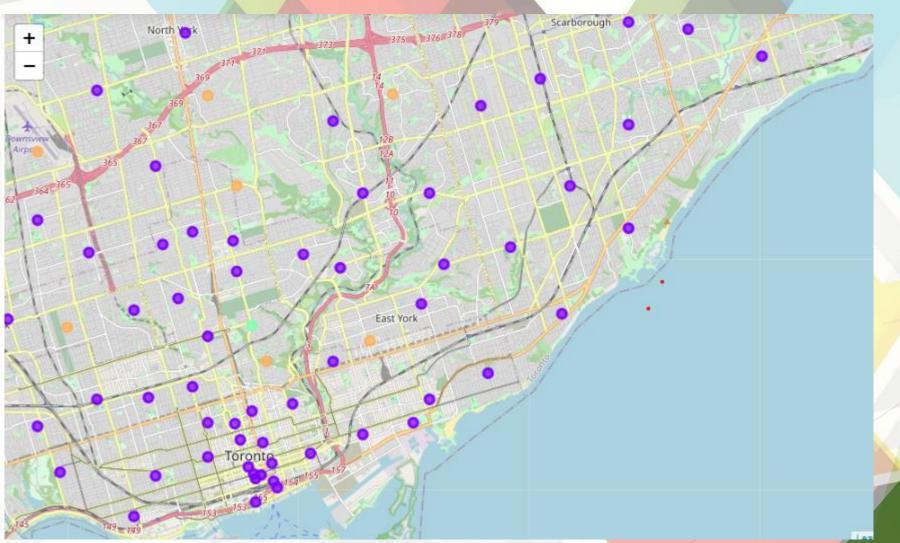
Printing the ten most common venues of Montreal, Canada

22 M_neighborhoods_venues_sorted.head()

| | 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 |
|---|--------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| 0 | Saint-Laurent Central | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | Park | Public Art | Pub | Poutine Place |
| 1 | Ahuntsic Central | Pizza Place | Ice Cream Shop | Sandwich Place | Convenience Store | Coffee Shop | Beer Store | Accessories Store | Plaza | Pet Store | Pharmacy |
| 2 | Ahuntsic East | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | Park | Public Art | Pub | Poutine Place |
| 3 | Ahuntsic North | Pizza Place | Ice Cream Shop | Sandwich Place | Convenience Store | Coffee Shop | Beer Store | Accessories Store | Plaza | Pet Store | Pharmacy |
| 4 | Ahuntsic Southeast | Pizza Place | Ice Cream Shop | Sandwich Place | Convenience Store | Coffee Shop | Beer Store | Accessories Store | Plaza | Pet Store | Pharmacy |

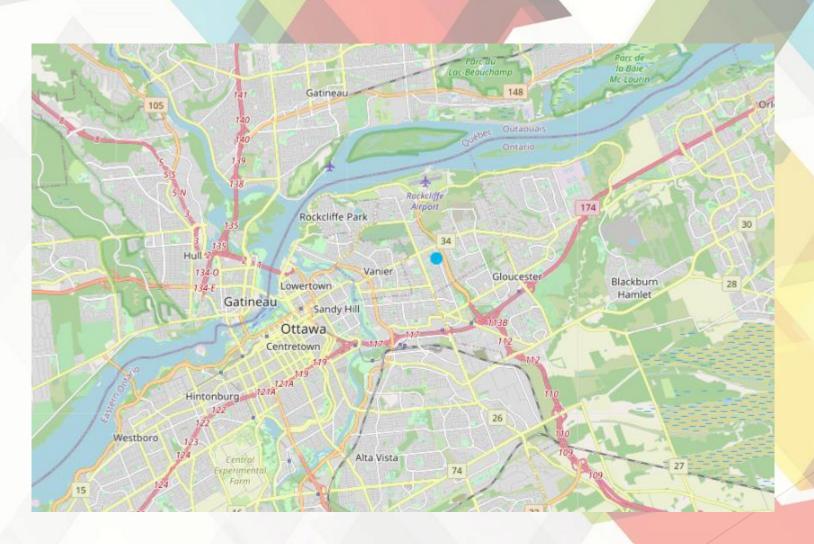
Folium Map Method Toronto, Canada

Hotspots of Toronto, Canada



Folium Map Method Montreal, Canada

Hotspots of Toronto, Canada



Cluster 1 of Toronto, Canada

| Borough | Cluster Labels | 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 |
|------------------|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------------|------------------------------|
| North York | 0 | Pizza Place | Hockey Arena | Intersection | Coffee Shop | Portuguese Restaurant | Men's Store | Metro Station | Mediterranean Restaurant | Medical Center | Massage Studio |
| Downtown Toronto | 0 | Coffee Shop | Park | Café | Bakery | Pub | Breakfast Spot | Theater | Cosmetics Shop | Dessert Shop | Beer Store |
| North York | 0 | Clothing Store | Furniture / Home Store | Boutique | Arts & Crafts Store | Miscellaneous Shop | Gift Shop | Coffee Shop | Vietnamese Restaurant | Accessories Store | Mediterranean Restaurant |
| Queen's Park | 0 | Coffee Shop | Sushi Restaurant | Sandwich Place | Beer Bar | Fried Chicken Joint | Smoothie Shop | Burrito Place | Mexican Restaurant | Café | Yoga Studio |
| North York | 0 | Caribbean Restaurant | Gym | Japanese Restaurant | Café | Yoga Studio | Miscellaneous Shop | Monument / Landmark | Molecular Gastronomy Restaurant | Modern European Restaurant | Mobile Phone Shop |
| East York | 0 | Pizza Place | Pharmacy | Athletics & Sports | Flea Market | Bank | Breakfast Spot | Gastropub | Intersection | Gym / Fitness Center | Optical Shop |

Cluster 2 of Toronto, Canada

```
#### Cluster 2
Cluster_2 = Toronto_merged.loc[Toronto_merged['Cluster Labels'] == 1, Toronto_merged.columns[[1] + list(range(5, Toronto_mergedCluster_2 # Cluster_2 # Cluster_2
```

| | Borough | Cluster Labels | 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 |
|----|--------------------|-------------------|-----------------------------|-------------------------------|-----------------------------|-----------------------------|---------------------------------------|---------------------------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 0 | North York | 1 | Food & Drink Shop | Bus Stop | Park | Metro Station | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant | Yoga Studio |
| 10 | North York | 1 | Pizza Place | Bakery | Park | Japanese Restaurant | Mexican Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Metro Station |
| 21 | York | 1 | Park | Women's Store | Pool | Metro Station | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant | Mediterranean Restaurant |
| 40 | North York | 1 | Business Service | Airport | Park | Yoga Studio | Mexican Restaurant | Molecular Gastronomy Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant |
| 49 | North York | 1 | Bakery | Construction & Landscaping | Park | Basketball Court | Yoga Studio | Mexican Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant |
| 61 | Central Toronto | 1 | Business Service | Park | Swim School | Bus Line | Yoga Studio | Middle Eastern Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Mexican Restaurant |
| 77 | Etobicoke | 1 | Sandwich Place | Park | Mobile Phone Shop | Yoga Studio | Metro Station | Modern European Restaurant | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant | Men's Store |
| 85 | Scarborough | 1 | Intersection | Playground | Park | Metro Station | Molecular Gastronomy Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant |

Cluster 3 of Toronto, Canada

```
### Cluster 3
Cluster_3 = Toronto_merged.loc[Toronto_merged['Cluster Labels'] == 2, Toronto_merged.columns[[1] + list(range(5, Toronto_merged
Cluster_3
### Cluster_3
### Cluster_3
### Cluster_3
### Cluster_3
```

| | Borough | Cluster Labels | 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 |
|-----|---------------|-------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------------|-----------------------------|-----------------------------|---------------------------------|-----------------------------|------------------------------|
| 57 | North York | 2 | Baseball Field | Yoga Studio | Mexican Restaurant | Molecular Gastronomy Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Metro Station | Lounge |
| 101 | Etobicoke | 2 | Baseball Field | Yoga Studio | Mexican Restaurant | Molecular Gastronomy Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Metro Station | Lounge |

Cluster 4 of Toronto, Canada

| | Borough | Cluster Labels | Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | Ommon Common Venue | 6th Most Common Venue | 7th Most Common Venue | 8th Most Common Venue | Ommon Venue | Common Venue |
|----|-----------------------------|-------------------|-----------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------------|-----------------------------|-----------------------------|---------------------------------|-----------------------|-----------------------------|
| 35 | East YorkEast Toronto | 3 | Park | Convenience Store | Yoga Studio | Metro Station | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant | Mediterranean Restaurant |
| 52 | North York | 3 | Park | Yoga Studio | Metro Station | Molecular Gastronomy Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant | Men's Store |
| 64 | York | 3 | Park | Convenience Store | Yoga Studio | Metro Station | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant | Mediterranean Restaurant |
| 66 | North York | 3 | Park | Convenience Store | Yoga Studio | Metro Station | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant | Mediterranean Restaurant |

Cluster 5 of Toronto, Canada

```
### Cluster 5
Cluster_5 = Toronto_merged.loc[Toronto_merged['Cluster Labels'] == 4, Toronto_merged.columns[[1] + list(range(5, Toronto_merged
Cluster_5
### Cluster_5
### Cluster_5
### Cluster_5
```

| Borough | Cluster Labels | 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 |
|---------------|-------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------------|-----------------------------|-----------------------------|---------------------------------|-----------------------------|-----------------------------|------------------------------|
| 6 Scarborough | 4 | Fast Food Restaurant | Metro Station | Molecular Gastronomy Restaurant | Modern European Restaurant | Mobile Phone Shop | Miscellaneous Shop | Middle Eastern Restaurant | Mexican Restaurant | Yoga Studio | Monument / Landmark |

Cluster 1 of Montreal, Canada

```
### Montreal Cluster 1
M_Cluster_1 = Montreal_merged.loc[Montreal_merged['Cluster Labels'] == 0, Montreal_merged.columns[[1] + list(range(Montreal_M_Cluster_1
### Cluster_1
### Montreal Cluster 1
### M
```

| Neighborhood | Latitude | Longitude | Cluster Labels | 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 | |
|--------------------------------------|----------|-----------|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------|---|
| Montreal East | 44.42 | -80.10 | 0 | Pizza Place | loe Cream Shop | Sandwich Place | Convenience Store | Coffee Shop | Beer Store | Accessories Store | Plaza | Pet Store | Pharmacy | |
| Ahuntsic North | 44.42 | -80.10 | 0 | Pizza Place | loe Cream Shop | Sandwich Place | Convenience Store | Coffee Shop | Beer Store | Accessories Store | Plaza | Pet Store | Pharmacy | |
| Downtown Montreal East | 44.42 | -80.10 | 0 | Pizza Place | loe Cream Shop | Sandwich Place | Convenience Store | Coffee Shop | Beer Store | Accessories Store | Plaza | Pet Store | Pharmacy | |
| Notre-Dame- de-Grâce Southwest | 44.42 | -80.10 | 0 | Pizza Place | Ice Cream Shop | Sandwich Place | Convenience Store | Coffee Shop | Beer Store | Accessories Store | Plaza | Pet Store | Pharmacy | |
| Place Desjardins | 44.42 | -80.10 | 0 | Pizza Place | loe Cream Shop | Sandwich Place | Convenience Store | Coffee Shop | Beer Store | Accessories Store | Plaza | Pet Store | Pharmacy | |
| Saint- | | 22.42 | | Pizza | Ice Cream | Sandwich | Convenience | Coffee | Beer | Accessories | - | 5 : 6: | ~ | * |

Cluster 2 of Montreal, Canada

```
### Montreal Cluster 2
M_Cluster_2 = Montreal_merged.loc[Montreal_merged['Cluster Labels'] == 1, Montreal_merged.columns[[1] + list(range(Montreal_merged.columns[1] + list(range(Montreal_merged.columns[2] + Cluster_2 # Cluster_2
```

| | Borough | PostalCode | Borough | Neighborhood | Latitude | Longitude | Cluster Labels | 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 N Comi Ve |
|----|-----------------------------------|------------|-----------------------------------|---------------------------|----------|-----------|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|
| 63 | Mercier (Montreal) | H2N | Mercier (Montreal) | Mercier West | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | ı |
| 64 | Ahuntsic, Quebec | H3N | Ahuntsic, Quebec | Ahuntsic East | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | - 1 |
| 65 | Cartierville, Quebec | H4N | Cartierville, Quebec | Cartierville Northeast | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | - 1 |
| 66 | Saint- Laurent, Quebec | H7N | Saint- Laurent, Quebec | Saint-Laurent East | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | - 1 |
| 67 | Vimont, Quebec | H8N | Vimont, Quebec | Vimont | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | - 1 |
| 83 | Mount Royal, Quebec | H1S | Mount Royal, Quebec | Mount Royal Central | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | - 1 |
| 84 | Saint- Laurent, Quebec | H2S | Saint- Laurent, Quebec | Saint-Laurent Central | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | 1 |
| 85 | Laval-sur- le-Lac | H3S | Laval-sur- le-Lac | Laval-sur-le- Lac | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | 1 |
| 86 | Ville Saint- Pierre, Quebec | H4S | Ville Saint- Pierre, Quebec | Ville Saint- Pierre | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | L |
| 87 | LaSalle, Quebec | H7S | LaSalle, Quebec | LaSalle West | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | - 1 |
| 88 | Pointe- Claire | H8S | Pointe- Claire | Pointe-Claire | 47.99 | -84.77 | 1 | Restaurant | Convenience Store | Sandwich Place | Grocery Store | Gas Station | Accessories Store | - 1 |

Cluster 3 of Montreal, Canada

| | Borough | PostalCode | Borough | Neighborhood | Latitude | Longitude | Cluster Labels | 1st Most Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue | 6th Most Common Venue |
|----|--|------------|--|--------------------------------------|----------|-----------|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 1 | Saint-Michel district, Quebec | H2A | Saint-Michel district, Quebec | Saint-Michel East | 45.44 | -75.64 | 2 | Grocery Store | Restaurant | Bank | Greek Restaurant | Pizza Place | Discount Store |
| 2 | Downtown Montreal | НЗА | Downtown Montreal | Downtown Montreal North | 45.44 | -75.64 | 2 | Grocery Store | Restaurant | Bank | Greek Restaurant | Pizza Place | Discount Store |
| ; | McGill University | H4A | McGill University | McGill University | 45.44 | -75.64 | 2 | Grocery Store | Restaurant | Bank | Greek Restaurant | Pizza Place | Discount Store |
| 4 | Notre- Dame-de- Grâce, Quebec | H5A | Notre- Dame-de- Grâce, Quebec | Notre-Dame- de-Grâce Northeast | 45.44 | -75.64 | 2 | Grocery Store | Restaurant | Bank | Greek Restaurant | Pizza Place | Discount Store |
| | Place Bonaventure | H7A | Place Bonaventure | Place Bonaventure | 45.44 | -75.64 | 2 | Grocery Store | Restaurant | Bank | Greek Restaurant | Pizza Place | Discount Store |
| (| Duvernay- Est, Quebec | H9A | Duvernay- Est, Quebec | Duvernay-Est | 45.44 | -75.64 | 2 | Grocery Store | Restaurant | Bank | Greek Restaurant | Pizza Place | Discount Store |
| 7 | Dollard-des- Ormeaux | H1B | Dollard-des- Ormeaux | Ormeaux Northwest | 45.65 | -73.51 | 2 | Restaurant | Italian Restaurant | Liquor Store | Grocery Store | Pharmacy | Breakfast Spot |
| 14 | Dollard-des- Ormeaux | H1C | Dollard-des- Ormeaux | Ormeaux East | 45.65 | -73.51 | 2 | Restaurant | Italian Restaurant | Liquor Store | Grocery Store | Pharmacy | Breakfast Spot |
| 28 | Duvernay, Quebec | H3G | Duvernay, Quebec | Duvernay | 45.50 | -73.58 | 2 | Café | Italian Restaurant | Sandwich Place | Hotel | Clothing Store | Art Museum |
| 46 | The Plateau | H2K | The Plateau | Plateau Mont- Roval North | 45.54 | -73.55 | 2 | Dive Bar | Tex-Mex | Gvm Pool | Skating | Skate Park | Sushi |

Cluster 4 of Montreal, Canada

```
### Montreal Cluster 4
M_Cluster_4 = Montreal_merged.loc[Montreal_merged['Cluster Labels'] == 3, Montreal_merged.columns[[1] + list(range(Montreal_M_Cluster_4
### Cluster_4
### Cluster_4
### Montreal Cluster 4
M_Cluster_4 = Montreal_merged.loc[Montreal_merged['Cluster Labels'] == 3, Montreal_merged.columns[[1] + list(range(Montreal_merged_Cluster_4)
### Cluster_4
```

| | Borough | PostalCode | Borough | Neighborhood | Latitude | Longitude | Cluster Labels | 1st Most Common Venue | | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue | 6th Most Common Venue | 7i Ci |
|----|-------------------------|------------|-------------------------|-------------------------|----------|-----------|-------------------|-----------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|---|----------|
| 0 | Pointe-aux- Trembles | H1A | Pointe-aux- Trembles | Pointe-Aux- Trembles | 45.67 | -73.50 | 3 | Convenience Store | Clothing Store | Pharmacy | Bus Stop | Accessories Store | Residential Building (Apartment / Condo) | |
| 62 | Akwesasne | H1N | Akwesasne | Akwesasne | 45.58 | -73.52 | 3 | Bus Stop | Sporting Goods Shop | Liquor Store | Accessories Store | Ramen Restaurant | Public Art | |

Cluster 5 of Montreal, Canada

| rough | Neighborhood | Latitude | Longitude | Cluster Labels | 1st Most Common Venue | 2nd Most Common Venue | | 4th Most Common Venue | | 6th Most Common Venue | 7th Most Common Venue | | 9th Most Common Venue | 10th Most Common Venue |
|-----------------|--------------|----------|-----------|-------------------|-----------------------------|-----------------------------|----------------------|-----------------------------|---------------------|-----------------------------|-----------------------------|------------------|-----------------------------|---------------------------------|
| Anjou, uebec | Anjou East | 45.6 | -73.51 | 4 | Diner | Baseball Field | Accessories Store | Opera House | Ramen Restaurant | Public Art | Pub | Poutine Place | Portuguese Restaurant | Plaza |

Choosing a destination for family vacation

Toronto, Canada



Choosing a destination for family vacation

Montreal, Canada



Both cities of Toronto and Montreal are beautiful canadian destinations

Toronto seems like a metropolis and Montreal seems like a historic cultural center place.

Both cities of Toronto and Montreal are beautiful canadian destinations

By looking at some of the hot spots on each city venues, it seems as if Toronto gave a better hot spot locations

And Using following code:

```
Toronto_1st = Cluster_1['1st Most Common Venue']

Montreal_4th = M_Cluster_3['4th Most Common Venue']

print(Toronto_1st, 3*'\n', Montreal_4th)
```

Toronto, Canada

| | pi pl |
|----|----------------------------|
| 1 | Pizza Place |
| 2 | Coffee Shop |
| 3 | Clothing Store |
| 4 | Coffee Shop |
| 7 | Caribbean Restaurant |
| 8 | Pizza Place |
| 9 | Coffee Shop |
| 11 | Filipino Restaurant |
| 12 | Construction & Landscaping |
| 13 | Restaurant |
| 14 | Park |
| 15 | Coffee Shop |
| 16 | Field |
| 17 | Pharmacy |
| 18 | Medical Center |
| 19 | Health Food Store |
| 20 | Coffee Shop |
| 22 | Coffee Shop |
| 23 | Coffee Shop |
| 24 | Coffee Shop |
| 25 | Grocery Store |
| 26 | Hakka Restaurant |
| 27 | Fast Food Restaurant |
| 28 | Bank |
| 29 | Indian Restaurant |
| 30 | Coffee Shop |
| 31 | Pharmacy |
| 32 | Playground |
| 33 | Clothing Store |
| 34 | Massage Studio |
| 36 | Coffee Shop |
| 37 | Bar |
| 38 | Hobby Shop |
| 39 | Café |
| 41 | Greek Restaurant |
| 42 | Coffee Shop |

Montreal, Canada

Name: 4th Most Common Venue, dtype: object

```
Greek Restaurant
      Greek Restaurant
      Greek Restaurant
      Greek Restaurant
    Greek Restaurant
      Greek Restaurant
         Grocery Store
14
         Grocery Store
28
                 Hotel
46
          Skating Rink
           Pizza Place
52
53
    Greek Restaurant
54
   Greek Restaurant
    Greek Restaurant
          Skating Rink
101
          Concert Hall
108
```

By the venues and thanks to Foursquare API, we have selected Toronto, Canada for our family vacation!!!!