



# LOCATING A COFFEE SHOP IN TORONTO

Keith Davies

# Background



We will be determining a good location to set up a new coffee shop in Toronto.

To find a good location, we will divide the city of Toronto into postal codes and will then use FourSquare to map out bars and coffee shops in those areas. Areas with many bars but few coffee shops can probably support a new coffee shop.

We will check coffee shops in these postal codes for user-submitted ratings, to see if any of these are particularly strong or weak.

# Postal Code Data

Postal code data and centroids was found by importing the below file. The latitudes and longitudes will be used a little later in the calls to the FourSquare API.

```
In [260]: 1 lat_long_df = pd.read_csv('https://cocl.us/Geospatial_data')  
          2 lat_long_df.head()
```

Out[260]:

	Postal Code	Latitude	Longitude
0	M1B	43.806686	-79.194353
1	M1C	43.784535	-79.160497
2	M1E	43.763573	-79.188711
3	M1G	43.770992	-79.216917
4	M1H	43.773136	-79.239476

# FourSquare Data

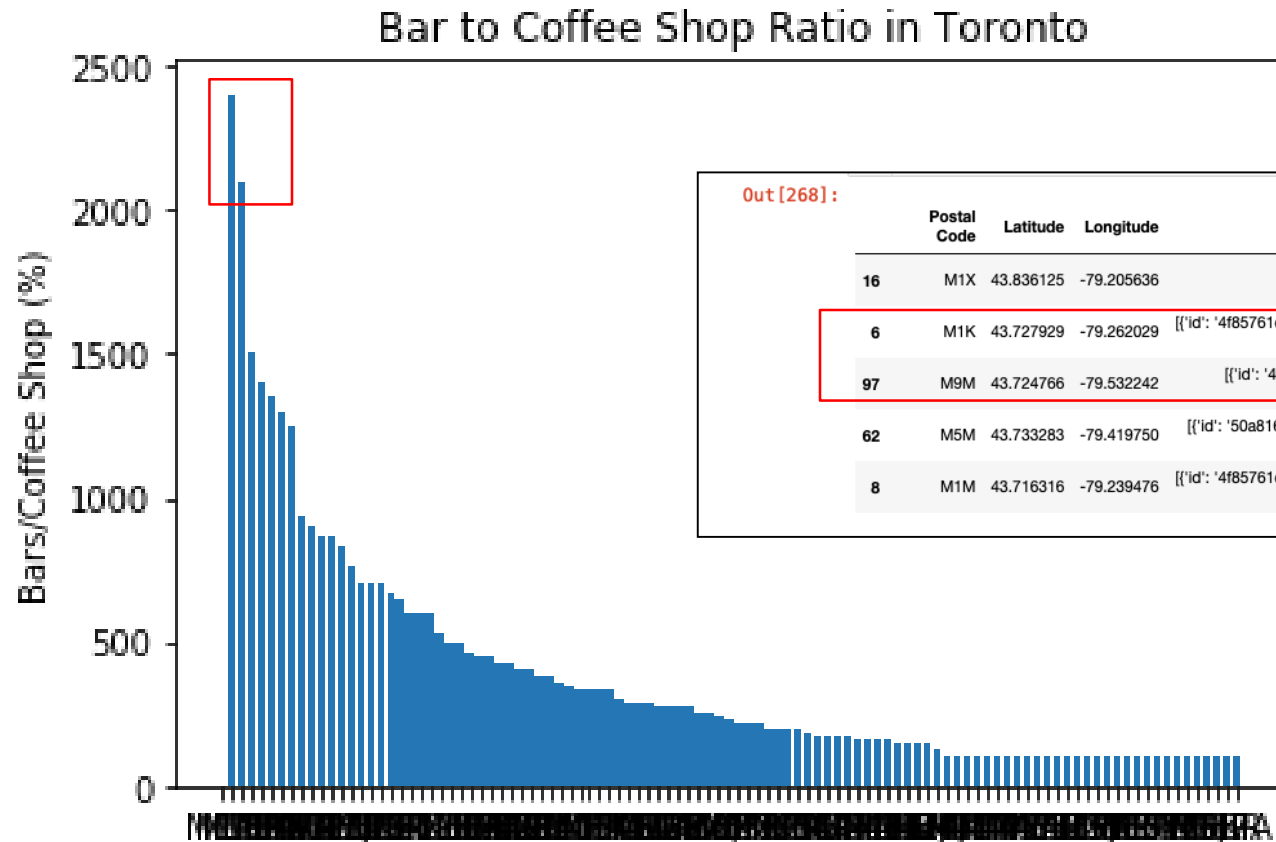
Each postal code was searched for coffee shops and bars within a 2000-meter radius. We then calculated the bar : coffee shop ratio to find good candidate sites.

Out[268]:

	Postal Code	Latitude	Longitude	Coffee Shop Venues	Coffee Shop Count	Bars Venues	Bars Count	Ratio
16	M1X	43.836125	-79.205636	[]	0	[{'id': '4db5ac9d1e7248d135b982e6', 'name': 'G...}	1	inf
6	M1K	43.727929	-79.262029	[{'id': '4f85761ee4b0388157a38e95', 'name': 'C...}	1	[{'id': '4b7c9ea1f964a520219e2fe3', 'name': 'S...}	24	2400.0
97	M9M	43.724766	-79.532242	[{'id': '4d1c614409546dcb117ad138', 'name': 'C...}	1	[{'id': '4f80b6ece4b09a1477130e6d', 'name': 'W...}	21	2100.0
62	M5M	43.733283	-79.419750	[{'id': '50a81655e4b0e7faf55ff531', 'name': 'W...}	2	[{'id': '4d02475137caa1cd3c56e347', 'name': 'J...}	30	1500.0
8	M1M	43.716316	-79.239476	[{'id': '4f85761ee4b0388157a38e95', 'name': 'C...}	1	[{'id': '4e0a7b3a1f6e56a68103934a', 'name': 'A...}	14	1400.0

# Vidualization

There is lots of variation in our bar : coffee shop ratio. We can see the first two postal codes have a ratio higher than 20:1. These will be the best sites for future investigation.



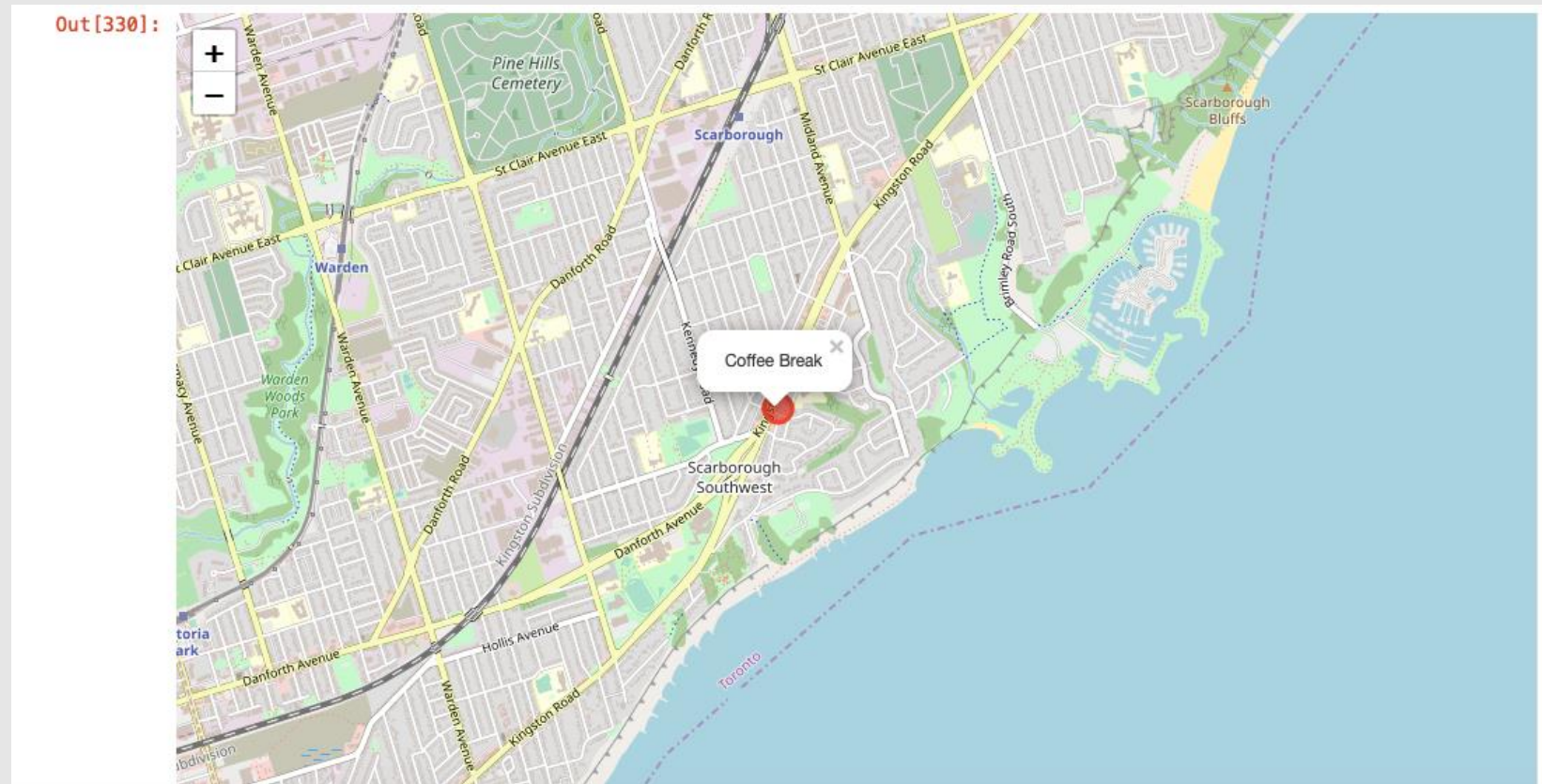
Out[268]:

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6	M1K	43.727929	-79.262029	[{'id': '4f85761ee4b0388157a38e95', 'name': 'C...'}]	1	[{'id': '4b7c9ea1f964a520219e2fe3', 'name': 'S...'}]	24	2400.0
97	M9M	43.724766	-79.532242	[{'id': '4d1c614409546dcb117ad138', 'name': 'C...'}]	1	[{'id': '4f80b6ece4b09a1477130e6d', 'name': 'W...'}]	21	2100.0
62	M5M	43.733283	-79.419750	[{'id': '50a81655e4b0e7faf55ff531', 'name': 'W...'}]	2	[{'id': '4d02475137caa1cd3c56e347', 'name': 'J...'}]	30	1500.0
8	M1M	43.716316	-79.239476	[{'id': '4f85761ee4b0388157a38e95', 'name': 'C...'}]	1	[{'id': '4e0a7b3a1f6e56a68103934a', 'name': 'A...'}]	14	1400.0



# M1K Coffee Shop

Our coffee shop in the M1K area is located in the Scarborough Southwest region of Toronto and is called Coffee Break.



# M1K Coffee Shop User Rating Details

Unfortunately, this coffee shop has no user ratings yet, so it is impossible for us to determine if our consumers here are satisfied with their coffee shop option.

Out[274]:

	venue.id	venue.name	venue.location.lat	venue.location.lng	venue.location.labeledLatLngs	venue.location.cc	venue.location.country	venue
0	4f85761ee4b0388157a38e95	Coffee Break	43.704067	-79.25227	[{'label': 'display', 'lat': 43.70406651209047...	CA	Canada	

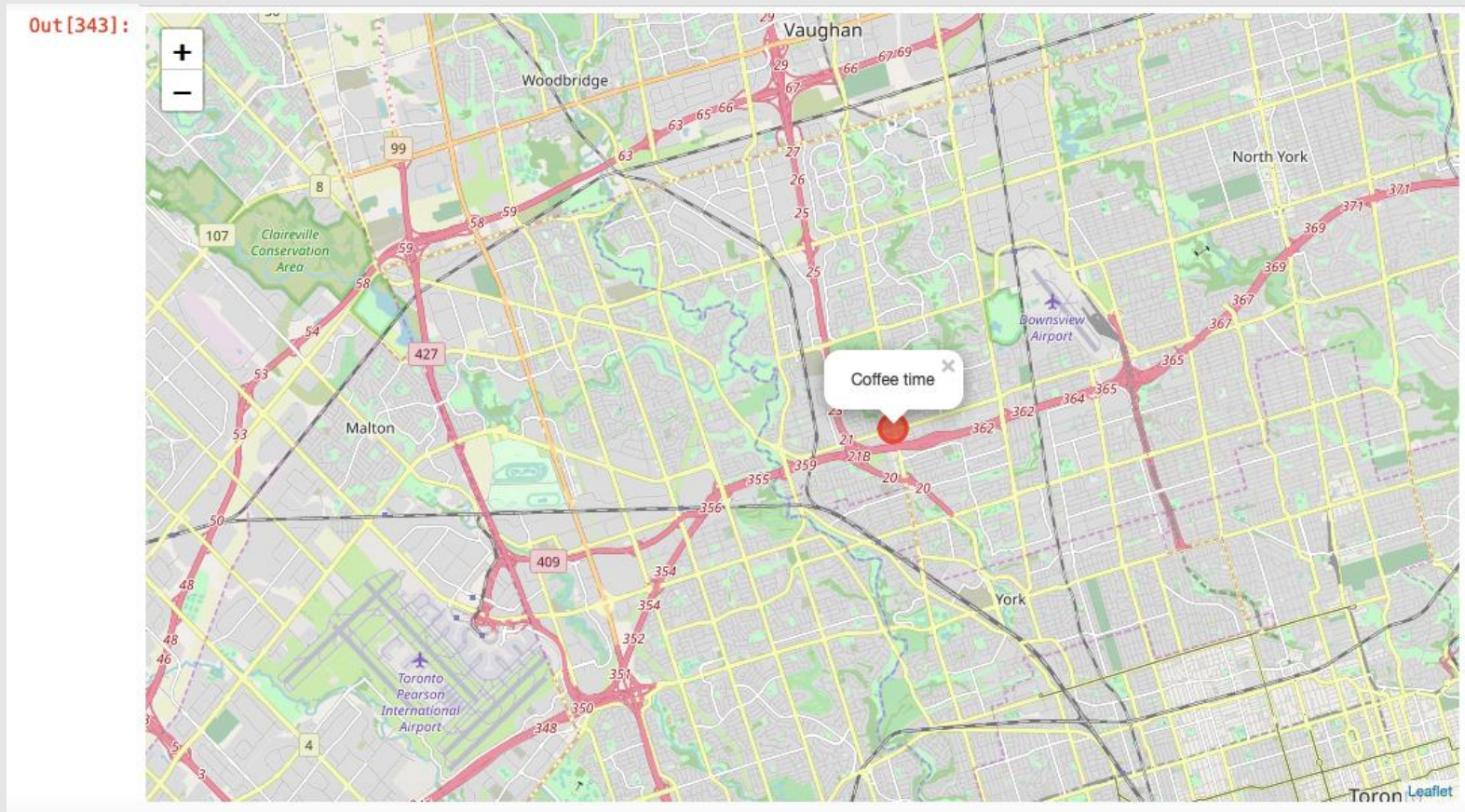
1 rows x 46 columns

In [275]: 1 venue\_details\_df.columns

Out[275]: Index(['venue.id', 'venue.name', 'venue.location.lat', 'venue.location.lng', 'venue.location.labeledLatLngs', 'venue.location.cc', 'venue.location.country', 'venue.location.formattedAddress', 'venue.canonicalUrl', 'venue.categories', 'venue.verified', 'venue.stats.tipCount', 'venue.price.tier', 'venue.price.message', 'venue.price.currency', 'venue.likes.count', 'venue.likes.groups', 'venue.dislike', 'venue.ok', 'venue.allowMenuUrlEdit', 'venue.beenHere.count', 'venue.beenHere.unconfirmedCount', 'venue.beenHere.marked', 'venue.beenHere.lastCheckinExpiredAt', 'venue.specials.count', 'venue.specials.items', 'venue.photos.count', 'venue.photos.groups', 'venue.reasons.count', 'venue.reasons.items', 'venue.hereNow.count', 'venue.hereNow.summary', 'venue.hereNow.groups', 'venue.createdAt', 'venue.tips.count', 'venue.tips.groups', 'venue.shortUrl', 'venue.timeZone', 'venue.listed.count', 'venue.listed.groups', 'venue.seasonalHours', 'venue.pageUpdates.count', 'venue.pageUpdates.items', 'venue.inbox.count', 'venue.inbox.items', 'venue.attributes.groups'], dtype='object')

# M9M Coffee Shop

Our coffee shop in the M9M area is located in northwest Toronto and is called Coffee Time.





# M9M Coffee Shop User Rating Details

Unfortunately, the coffee shop in M9M also has no user ratings, so it is also impossible for us to determine if our consumers here are satisfied with their coffee shop option.

```
In [279]: 1 venue_details_df.columns
```

```
Out[279]: Index(['venue.id', 'venue.name', 'venue.location.lat', 'venue.location.lng',  
                'venue.location.labeledLatLngs', 'venue.location.cc',  
                'venue.location.country', 'venue.location.formattedAddress',  
                'venue.canonicalUrl', 'venue.categories', 'venue.verified',  
                'venue.stats.tipCount', 'venue.price.tier', 'venue.price.message',  
                'venue.price.currency', 'venue.likes.count', 'venue.likes.groups',  
                'venue.dislike', 'venue.ok', 'venue.allowMenuUrlEdit',  
                'venue.beenHere.count', 'venue.beenHere.unconfirmedCount',  
                'venue.beenHere.marked', 'venue.beenHere.lastCheckinExpiredAt',  
                'venue.specials.count', 'venue.specials.items', 'venue.photos.count',  
                'venue.photos.groups', 'venue.reasons.count', 'venue.reasons.items',  
                'venue.hereNow.count', 'venue.hereNow.summary', 'venue.hereNow.groups',  
                'venue.createdAt', 'venue.tips.count', 'venue.tips.groups',  
                'venue.shortUrl', 'venue.timeZone', 'venue.listed.count',  
                'venue.listed.groups', 'venue.seasonalHours', 'venue.pageUpdates.count',  
                'venue.pageUpdates.items', 'venue.inbox.count', 'venue.inbox.items',  
                'venue.attributes.groups'],  
               dtype='object')
```

# Conclusion



In the absence of user rating data, we cannot know how satisfied consumers are with each of these two coffee shops but we do know that each of these regions is under-represented in terms of coffee shops.

We should first open our coffee shop in the Scarborough Southwest region in the M1K postal code since it has the highest meaningful value for the bar to coffee shop ratio.