Locating a new Coffee Shop in Toronto

Introduction & Business Problem
Let's assume that a new coffee company would like to enter the Toronto market with a chain of coffee shops. Because the coffee shop market is quite competitive, they would like to place their first coffee shops in neighborhoods where people are proven to like to get together but where there are relatively few incumbent coffee shops today.

Where we can find these neighbourhoods, it would be ideal if we could also check the local consumers relative satisfaction with their existing coffee shop choices so that we can place our new store near a coffee shop that is not currently satisfying their consumer base.

Data
We will use two main data sources to complete the analysis:

1) *Listing of Toronto Postal Codes*
'https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M'
We will gather the centroids of these postal codes in order to define neighborhoods around the city of Toronto. Each neighborhood will be evaluated for suitability to set up a new coffee shop.

2) FourSquare Data
'https://api.foursquare.com/v2/venues/search?'
We will use the FourSquare developer API to search for coffee chops near each postal code centroid and calculate the average ratings of those coffee shops.

Methodology
We will first import the latitude and longitude of the centroid for each postal code in Toronto.

Next we will search each of these centroids, within a 2km radius for coffee shops and for bars. We will assume that an area that has many bars but few coffee shops represents a good area where people like to gather and get together but is not yet saturated with coffee shops.

Once we have identified areas with high ratios of bars to coffee shops, we will check the rating of coffee shops in this area, looking for a coffee shop where current consumers are relatively dissatisfied. Placing our coffee shop near this coffee shop that is not currently satisfying its consumers is likely to be a good strategy for the coffee shop.

Results
The bar to coffee shop ratio varies significantly across postal codes. Two postal codes in particular stand out: M1K with a ratio of 24:1 and M9M with a ratio of 21:1.

In each of these postal codes, details were queried for the single coffee shop with the aim of finding an average user rating for this coffee shop. Unfortunately, the FourSquare data set shows that neither of these two coffee shops has any user ratings, making it impossible to determine how satisfied consumers at this location are with their local coffee shop.

Discussion
It is a shame that the FourSquare data set has relatively little rating data for the current coffee shops in Toronto. This data would have been quite helpful to gauge local consumers satisfaction with their existing choices.

That being said, finding neighborhoods with a 24:1 and 21:1 bar to coffee shop ratio appears quite promising. We could quite easily assume that these neighborhoods could easily support a second coffee shop based on their strong penetration of bars.

Conclusion

In conclusion, we should set up our coffee shop in the Scarborough Southwest region in Toronto due to the especially high bar to coffee shop ratio in this neighbourhood.