



Finding the Optimal Neighborhood to Expand Restaurant Business

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Introduction/Research Question

Successful restaurant businesses are often faced with the problem of where to open a new location

It is helpful to look for areas similar to the area where the original restaurant has succeeded

This analysis will assume the original restaurant is located in the Downtown Toronto (Rosedale) area

Research Question: What areas in Canada are most like Rosedale?



Map of Toronto (Rosedale Represented by Blue Dot)



Data Discussion

Data comes from AggData and the Foursquare API

Create dataset for each postal code with their name and the proportion of the venues by type

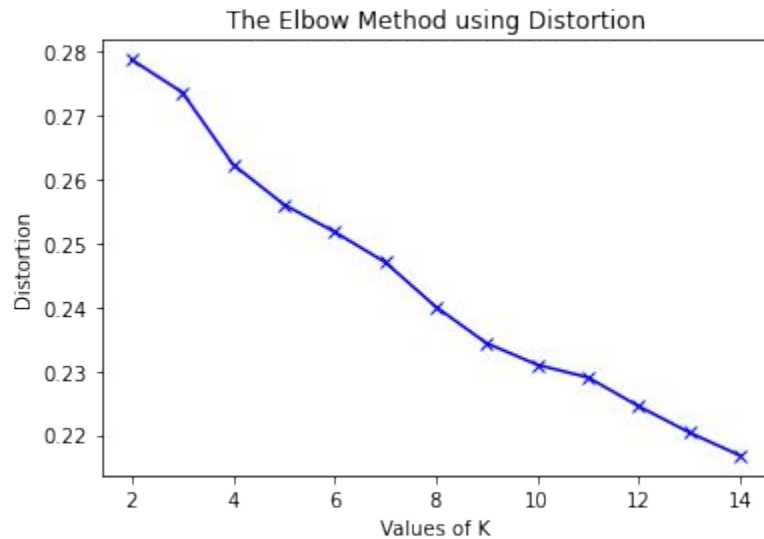
The dataset consists of 201 different areas and 388 different categories venues

Most Common Venues for Rosedale		
Rank	Type	Proportion
1	Park	0.294
2	Trail	0.118
3	Playground	0.059
4	Grocery Store	0.059
5	Candy Store	0.059
6	Café	0.059
7	Historic Site	0.059
8	Scenic Lookout	0.059
9	Farmers Market	0.059
10	Gym \ Fitness Center	0.059

K-Means Clustering: Elbow Method

The elbow method is first used to determine the optimal number of clusters

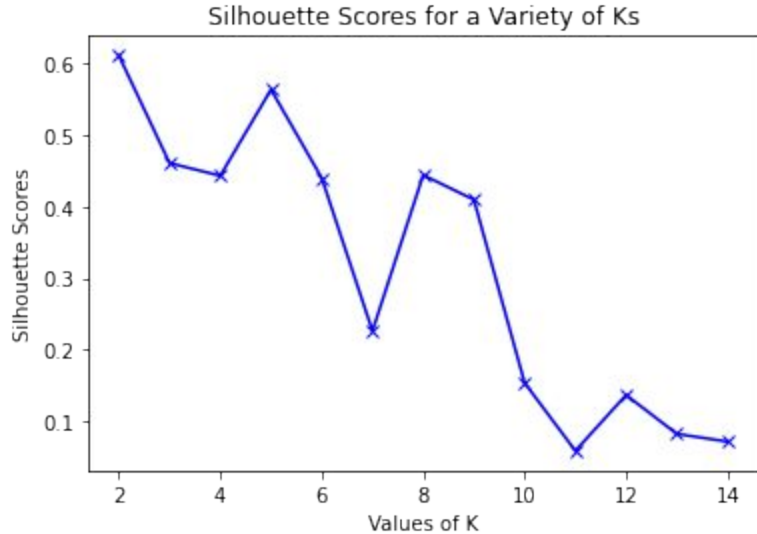
There is no clear elbow point so further analysis is needed



K-Means Clustering: Silhouette Scores

Silhouette scores were calculated for each k-value

The optimal number of clusters is determined to be 5



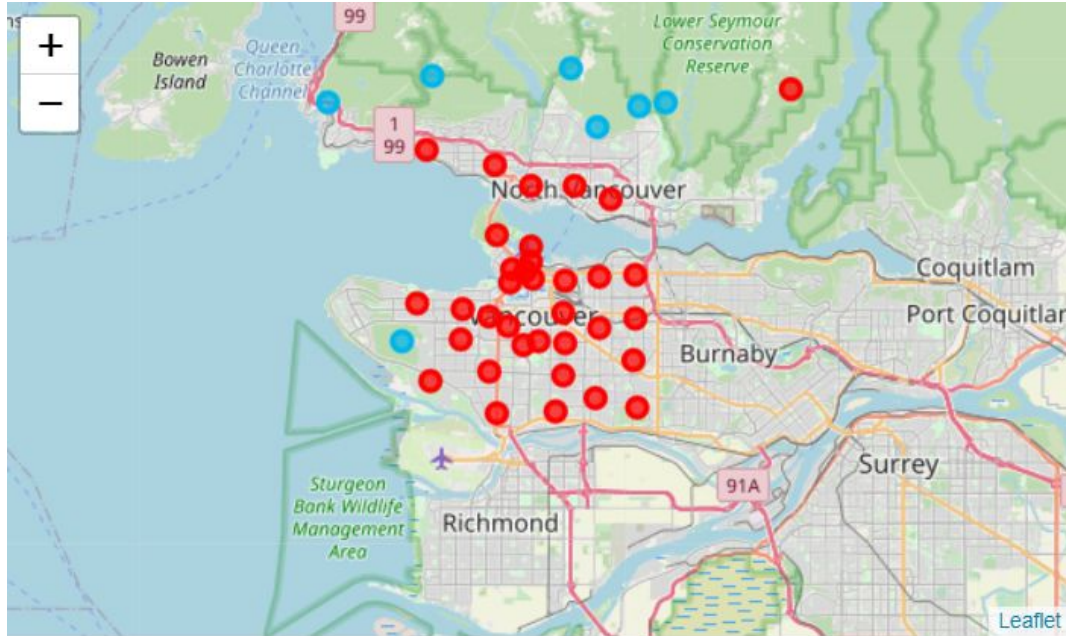
K-Means Clustering: Results

The list on the right is the areas in the same cluster as Rosedale

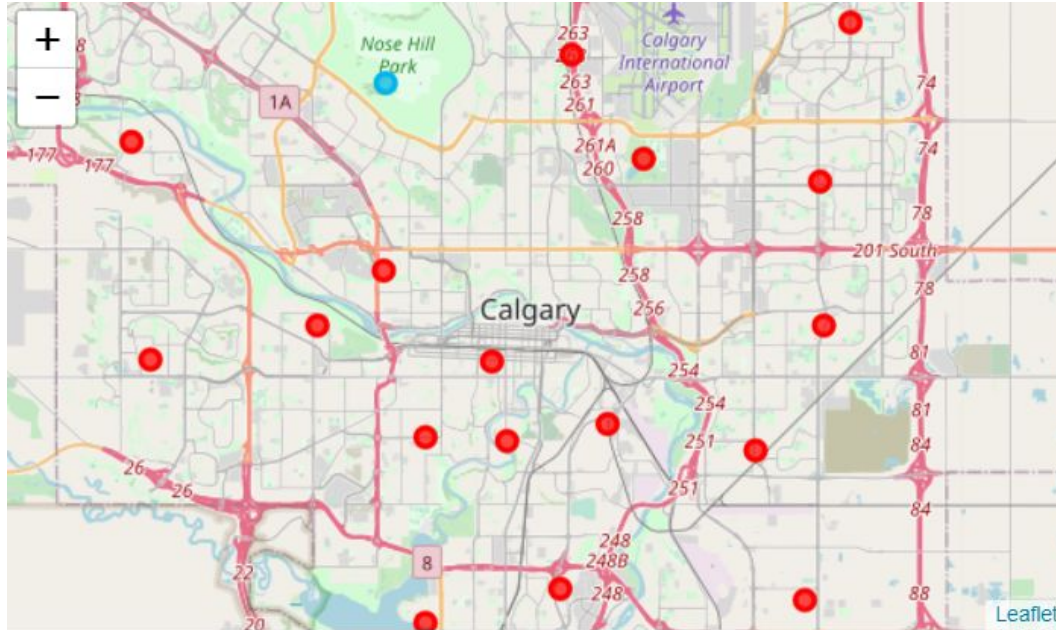
1. Vancouver (Chaldecutt / South University Endowment)
2. North Vancouver East Central
3. North Vancouver North Central
4. North Vancouver Northwest Central
5. North Vancouver Northwest
6. West Vancouver North
7. West Vancouver West
8. Calgary (Brentwood / Collingwood / Nose Hill)
9. Ottawa (Rockcliffe Park / New Edinburgh)
10. Winnipeg (Seven Oaks West)
11. Winnipeg (Inkster West)
12. Winnipeg (St. James-Assiniboia SE)
13. Winnipeg (Grassie / Pequis)



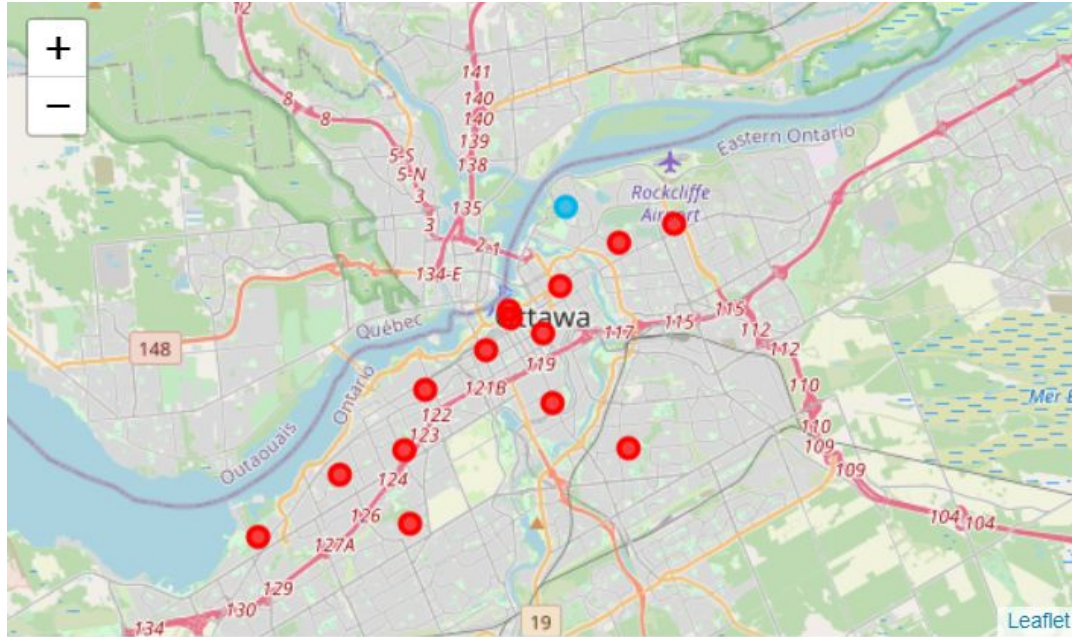
Map of Vancouver (Cities in the Cluster in Blue)



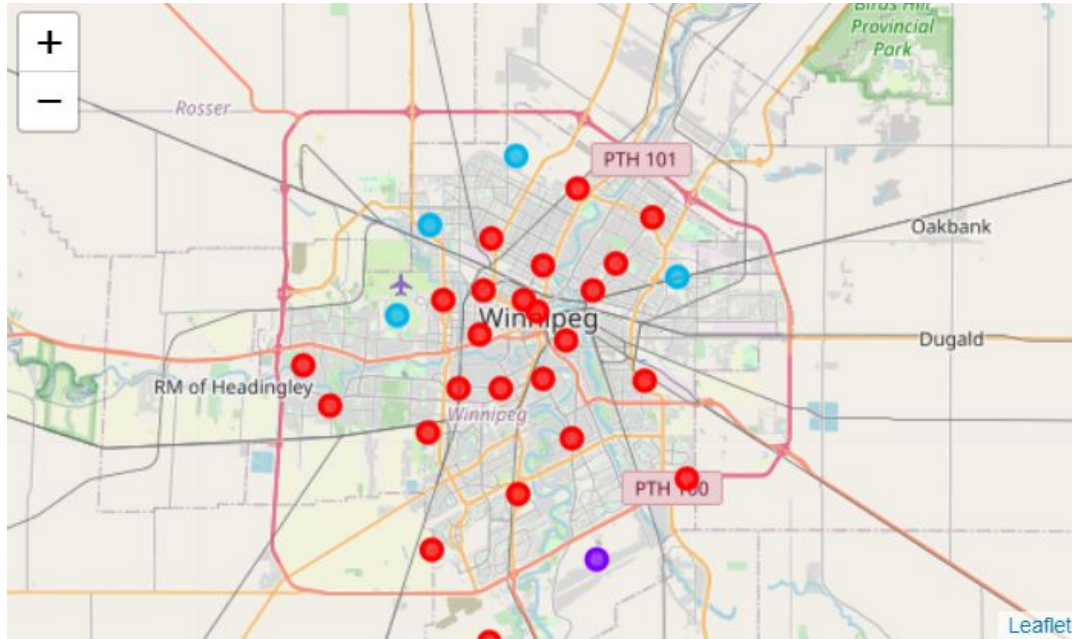
Map of Calgary (Cities in the Cluster in Blue)



Map of Ottawa (Cities in the Cluster in Blue)



Map of Winnipeg (Cities in the Cluster in Blue)



Conclusion

Refer to earlier list for areas where restaurant should look into expanding

Vancouver and Winnipeg might be best options because they have multiple areas in the cluster

Could add demographic data to improve model

