Coursera Capstone Project Report

Introduction / Business Problem

Searching for an apartment can be a stressful endeavour; there are many variables to consider such as proximity to public transit, shopping centers, restaurants; safety, and price. Leveraging the data available from Foursquare, I will focus on find the lowest rent price for a 1-bedroom apartment comparable to other locations with similar venues in close proximity.

The result will be a clustered list of neighbourhoods with similar venue options in proximity and the median rental price of a 1-bedroom apartment – filtered by price to select the best option with all desired amenities.

Data

The dataset used is focused on 1-bedroom rental prices in the city of Calgary, Alberta, Canada neighbourhoods.

"geopy.geocoders" library will be used to augment the data to include address coordinates (latitude and longitude) for each neighbourhood.

The data will then be used as input to Foursquare to obtain the top 10 venues per neighbourhood.

Data samples are provided below:

	Neighborhood	Median Rent
0	Beltline	1213.0
1	Downtown Calgary	1208.0
2	Mission	1100.0
3	Skyview Ranch	1297.0
4	Varsity	1057.0
5	Bridgeland	1195.0
6	The Properties	1000.0

	Neighborhood	Median Rent
7	Crescent Heights	1088.0
8	Bankview	950.0
9	Hillhurst	1300.0
10	Sunalta	968.0
11	Thorncliffe	1129.0
12	Mount royal	1000.0
13	Bowness	925.0
14	Kingsland	1035.0
15	Capital Hill	1065.0
16	Altadore	1400.0
17	Acadia	1000.0
18	Sunnyside	925.0
19	Banff Trail	972.0
20	Inglewood	1340.0
21	Haysboro	1200.0
22	Windsor Park	1500.0
23	Forest Heights	875.0
24	West Hillhurst	1212.0
25	South Calgary	925.0

	Neighborhood	Median Rent
26	Auburn Bay	1325.0
27	Glenbrook	1049.0
28	Palliser	1156.0
29	Glenmorgan	1145.0
30	Killarney	695.0
31	Rosscarrock	1050.0
32	Radisson Heights	1131.0
33	Mayland Heights	1279.0
34	Applewood Park	1050.0
35	Lakeview	1045.0
36	Cedarbrae	1075.0
37	University Heights	1063.0
38	Quarry Park	1359.0
39	Spruce Cliff	1239.0
40	LIncoln Park	1150.0
41	Wildwood	1304

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Beltline	51.040498	-114.072593	Milk Tiger Lounge	51.039357	-114.071403	Lounge
1	Beltline	51.040498	-114.072593	Central Memorial Park	51.041281	-114.070479	Park
2	Beltline	51.040498	-114.072593	Shelf Life Books	51.040737	-114.071526	Bookstore
3	Beltline	51.040498	-114.072593	Ox And Angela	51.037933	-114.073106	Latin American Restaurant
4	Beltline	51.040498	-114.072593	Yoga Passage	51.042799	-114.073123	Yoga Studio