Calgary's Crime Impacted Businesses

Coursera Capstone Project

Creator: Jahanzeb Shahid

Introduction

- Calgary, Alberta, incorporated as a city in 1894, population 1,239,220 (2016 consensus)
- It is the financial centre of western Canada, based on its key role in the development of the region's oil and gas industry.
- In the recent past, Calgary has seen very polar economic conditions by virtue of Alberta's dependence on Oil and Gas market.



Target Audience

- Passive and Active investors in businesses
- Looking to avoid communities with high rates of commercial crimes
- Could lead to better decision making and increased profitability.

Data

Data obtained from City of Calgary's open data source website

https://data.calgary.ca/Health-and-Safety/Community-Crime-Statistics/78ghn26t

Venue data will be found using Foursquare API.



NORTHWEST ABDUIL LAKE Break & Enter - Commercial 5 105.99 (A)D/1/2001 12 000 AM 2020 APR 114.20758 51 13233 2020 APR - ABDUIL LAKE - Break & Enter - Commercial POINT 114.20758 80589 51 13235355555) NORTHWEST ABDUIL LAKE Theft FROM Vehicle 2 105.99 (A)D/1/2001 12 0000 AM 2020 APR 114.20758 51 132353 2020 APR - ABDUIL LAKE POINT 114.20757805589 51 13235355555) NORTHWEST ABDUIL LAKE Theft Of Vehicle 2 105.99 (A)D/1/2001 12 0000 AM 2020 APR 114.20758 51 132353 2020 APR - ABDUIL LAKE POINT 114.20757805589 51 13235355555) NORTHWEST ABDUIL LAKE Theft Of Vehicle 2 105.99 (A)D/1/2001 12 0000 AM 2020 APR 114.20758 51 132353 2020 APR - ABDUIL LAKE Theft Of Vehicle POINT 114.207578055896 51 131235355555) NORTHWEST ASPEN WOODS Break & Enter - Owelling 1 9446 (A/D/1/2001 12 0000 AM 2020 APR 114.20788 114.20788 110.45131 2020 APR - ABPEN WOODS Theft ROM Vehicle 6 9446 (A/D/1/2001 12 0000 AM 2020 APR 114.20788 11.051313 2020 APR - ABPEN WOODS Theft ROM Vehicle POINT 114.207878720797 51 045130988551 NORTHWEST ASPEN WOODS Theft ROM Vehicle 5 9446 (A/D/1/2001 12 0000 AM 2020 APR 114.20788 11.051313 2020 APR - ABPEN WOODS Theft ROM Vehicle POINT 114.207878720797 51 045130988551 SUB-1/2000 AM 2020 APR 114.20788 11.051313 2020 APR - ABPEN WOODS Theft ROM Vehicle POINT 114.207878720797 51 045130988551 SUB-1/2000 AM 2020 APR 114.20788 11.051313 2020 APR - ABPEN WOODS Theft ROM Vehicle POINT 114.007878720797 51 045130988551 SUB-1/2000 AM 2020 APR 114.20788 11.051313 2020 APR - ABPEN WOODS Theft ROM Vehicle POINT 114.007878720797 51 045130988551 SUB-1/2000 AM 2020 APR 114.20788 11.051318 2020 APR - BENT WOODS Theft ROM Vehicle POINT 114.007878720797 51 045130988551 SUB-1/2000 AM 2020 APR 114.005189 2020 APR 114.20788 11.051318 2020 APR 114.20788 11.051318 2020 APR 114.20788 11.051318 2020 APR 114.20788 11.051318 2020 APR 1									
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MANY FT TAIL Stere Robbery 1	SOUTHEAST	AUBURN BAY	Assault (Non-domestic)	1	17607 04/01/2020 12:00:00 AN	2020 APR -1	13.95782	50.892705 2020-APR-AUBURN BAY-Assault (Non-domestic)	POINT (-113.957817281387 50.892705346575)
EMPT TRAIL Theft FROM Vehicle 1	CENTRE	BANFF TRAIL	Break & Enter - Other Premises	1	4153 04/01/2020 12:00:00 AN	2020 APR -1	14.11513	51.074217 2020-APR-BANFF TRAIL-Break & Enter - Other Premises	POINT (-114.115129022303 51.074216599416)
SMANTENAL Theft/Of Whicide	CENTRE	BANFF TRAIL	Street Robbery	1	4153 04/01/2020 12:00:00 AN	2020 APR -1	14.11513	51.074217 2020-APR-BANFF TRAIL-Street Robbery	POINT (-114.115129022303 51.074216599416)
MANY	CENTRE	BANFF TRAIL	Theft FROM Vehicle	1	4153 04/01/2020 12:00:00 AN	2020 APR -1	14.11513	51.074217 2020-APR-BANFF TRAIL-Theft FROM Vehicle	POINT (-114.115129022303 51.074216599416)
SAMAYIEW Break & Enter - Dwelling 1 5356 (A)/U/Z002 120000 A 2000 APR 114 10094 115 100413 1200-4978 (ANYIEW) Theft FOW Whele 3 5356 (A)/U/Z002 120000 A 2000 APR 114 10094 115 100413 1200-4978 (ANYIEW) Theft Of Vehicle 3 5356 (A)/U/Z002 120000 A 2000 APR 114 10094 115 100413 1200-4978 (ANYIEW) Theft Of Vehicle 50 NOT 114 100489 115 100413 1200-4978 (ANYIEW) The first of Commercial 1 751 (A)/U/Z002 120000 A 2000 APR 114 10194 114 10194 115 100413 1200-4978 (ANYIEW) The first of Commercial 1 115	CENTRE	BANFF TRAIL	Theft OF Vehicle	2	4153 04/01/2020 12:00:00 AN	2020 APR -1	14.11513	51.074217 2020-APR-BANFF TRAIL-Theft OF Vehicle	POINT (-114.115129022303 51.074216599416)
SAMEWINEW Theft PROM Vehicle 15 \$355 0-0401/2001 120000 AV 200 APR 111,0049 51,004131 2002-APR-BANNIVEW-Theft PROM Vehicle POINT (111,004991)10145 51,034131 2002-APR 111,0049 51,004131 2002-APR 111,0049	CENTRE	BANKVIEW	Break & Enter - Commercial	2	5256 04/01/2020 12:00:00 AN	2020 APR -1	14.10049	51.034131 2020-APR-BANKVIEW-Break & Enter - Commercial	POINT (-114.100489190214 51.034131244481)
SAMPLINE SAMPLINE Serial & Enter - Commercial 1 751 GAI/1/2002 12:00:00 A 2002 APR 111:1955 5097-658-1959-1968-1969-1969-1969-1969-1969-1969-196	CENTRE	BANKVIEW	Break & Enter - Dwelling	1	5256 04/01/2020 12:00:00 AN	2020 APR -1	14.10049	51.034131 2020-APR-BANKVIEW-Break & Enter - Dwelling	POINT (-114.100489190214 51.034131244481)
SOUTH BAVIEW Break & Inter - Commercial 1 75 04/01/2001 12:000 AM 2000 APR -114 11396 39746542 2000-APR-RAVIEW/Merak & Enter - Commercial 9/0117 114 113962/376865 937465457820] 13154 04/01/2001 12:000 AM 2000 APR -114 13696 1315464 2000-APR-REDINGTON HEIGHTS-Preak & Enter - Commercial 9/0117 114 1396395532 13154 04/01/2001 12:000 AM 2000 APR -114 13696 1315464 2000-APR-REDINGTON HEIGHTS-Preak & Enter - Commercial 9/0117 114 048961 1315464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1315464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1315464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1315464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316464 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316466 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316466 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316466 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 1316466 2000-APR-REDINGTON HEIGHTS-PREAK & Enter - Commercial 9/0117 114 048961 13164	CENTRE	BANKVIEW	Theft FROM Vehicle	15	5256 04/01/2020 12:00:00 AN	2020 APR -1	14.10049	51.034131 2020-APR-BANKVIEW-Theft FROM Vehicle	POINT (-114.100489190214 51.034131244481)
MORTH BEDINATION HEIGHTS	CENTRE	BANKVIEW	Theft OF Vehicle	3	5256 04/01/2020 12:00:00 AN	2020 APR -1	14.10049	51.034131 2020-APR-BANKVIEW-Theft OF Vehicle	POINT (-114.100489190214 51.034131244481)
NORTH	SOUTH	BAYVIEW	Break & Enter - Commercial	1	751 04/01/2020 12:00:00 AN	2020 APR -1	14.11396	50.974634 2020-APR-BAYVIEW-Break & Enter - Commercial	POINT (-114.113962307868 50.974634397802)
NORTH SEDINATION REGHTS	NORTH	BEDDINGTON HEIGHTS	Break & Enter - Commercial	4	11514 04/01/2020 12:00:00 AN	2020 APR -1	14.08491	51.131644 2020-APR-BEDDINGTON HEIGHTS-Break & Enter - Commercial	POINT (-114.084911140805 51.131643985322)
MOSTH SEDIMATION HEIGHTS	NORTH	BEDDINGTON HEIGHTS	Break & Enter - Other Premises	1	11514 04/01/2020 12:00:00 AN	2020 APR -1	14.08491	51.131644 2020-APR-BEDDINGTON HEIGHTS-Break & Enter - Other Premises	POINT (-114.084911140805 51.131643985322)
CENTRE ALTADORE BETUNE ASSAULT (Non-dimensate) 32 \$25129 A AUGUR (2012 02 00 00 Ak. 2020 APR -114 1,00551 9 51 1,0354 8 2020 APR RETUNE ASSAULT (Non-dimensate) POINT (-114 1,0055188797256 51,037437926217)	NORTH	BEDDINGTON HEIGHTS	Theft FROM Vehicle	3	11514 04/01/2020 12:00:00 AN	2020 APR -1	14.08491	51.131644 2020-APR-BEDDINGTON HEIGHTS-Theft FROM Vehicle	POINT (-114.084911140805 51.131643985322)
CENTRE ALTADORE Strak & Enter - Other Premises 6 S942 (AMJ/2001 12 0000 AM 2020 APR ALTADORE - HER FROM Vehicle POINT (1.14 100794741538 5.1019548466588)	NORTH	BEDDINGTON HEIGHTS	Theft OF Vehicle	10	11514 04/01/2020 12:00:00 AN	2020 APR -1	14.08491	51.131644 2020-APR-BEDDINGTON HEIGHTS-Theft OF Vehicle	POINT (-114.084911140805 51.131643985322)
CENTRE ATADORE	CENTRE	BELTLINE	Assault (Non-domestic)	13	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Assault (Non-domestic)	POINT (-114.055188797256 51.037437926217)
CENTRE ATADORE	CENTRE	ALTADORE	Break & Enter - Other Premises	6	6942 04/01/2020 12:00:00 AN	2020 APR -1	14.10079	51.015948 2020-APR-ALTADORE-Break & Enter - Other Premises	POINT (-114.100794741538 51.015948466883)
CENTRE AVTH/FORMWRBOOK Break & Enter. Commercial 2	CENTRE	ALTADORE	Theft FROM Vehicle	8	6942 04/01/2020 12:00:00 AN	2020 APR -1	14.10079	51.015948 2020-APR-ALTADORE-Theft FROM Vehicle	POINT (-114.100794741538 51.015948466883)
CENTRE AVTH/PONUMPSOOK Theft FROM Vehicle 8 0.4041/2001 12000 AM 2020 APR 11.802186 51.0021859 2000 APR APR-APPRIENDOR PARK Assailt (Non-demestic) 1 5881 0.4011/2001 12000 AM 2020 APR 11.802186 51.045882 2020 APR APR-APPRIENDOR PARK Assailt (Non-demestic) POINT (1.18.92785764420) 51.045881 2020 APR 11.802786 51.045882 2020 APR APR-APPRIENDOR PARK Theft FROM Vehicle POINT (1.18.92785764420) 51.046881 77.17.17.17.17.17.17.17.17.17.17.17.17.1	CENTRE	ALTADORE	Theft OF Vehicle	1	6942 04/01/2020 12:00:00 AN	2020 APR -1	14.10079	51.015948 2020-APR-ALTADORE-Theft OF Vehicle	POINT (-114.100794741538 51.015948466883)
APPLEWOOD PARK Assault (Non-domestic) 1 6881 0.040/2001 200000 AM 2020 APR -113.92786 51.04982 2020-APR-APPLEWOOD PARK-chest (Non-domestic) POINT (-113.927857644202 51.04981778175)	CENTRE	ALYTH/BONNYBROOK	Break & Enter - Commercial	2	0 04/01/2020 12:00:00 AN	2020 APR -1	14.02248	51.022859 2020-APR-ALYTH/BONNYBROOK-Break & Enter - Commercial	POINT (-114.022482205646 51.02285932043)
EAST APPLEWOOD PARK Theft ROM Vehicle 7 6981 (A)01/2001 12 000 AA 2020 APR 113 92786 51 0 44982 2020-APR APPLEWOOD PARK Theft POW Vehicle POINT (113 9278764420 51 0 44981778175)	CENTRE	ALYTH/BONNYBROOK	Theft FROM Vehicle	8	0 04/01/2020 12:00:00 AN	2020 APR -1	14.02248	51.022859 2020-APR-ALYTH/BONNYBROOK-Theft FROM Vehicle	POINT (-114.022482205646 51.02285932043)
EAST APPLEWOOD PARK Theft DF Vehicle 1 6981 0.401/2001 12:00:00 AM 2020 APR -113.92785 \$10.4082 2020-APR-APPLEWOOD PARK-Theft DF Vehicle POINT [-113.92785784420; 51.04981778175] NORTHWEST ARBOUR LAKE Theft FROM Vehicle 4 10639 0.4/01/2001 12:00:00 AM 2020 APR -114.20758 \$1.13683 2010-APR-ARBOUR LAKE-Theft FROM Vehicle POINT [-114.207578305896 51 13:13683555555] NORTHWEST ARBOUR LAKE Theft OF Vehicle 2 10639 0.4/01/2001 12:00:00 AM 2020 APR -114.20758 \$1.136835 2020-APR-ARBOUR LAKE-Theft FROM Vehicle POINT [-114.207578305986 51 13:13683555555] NORTHWEST ARBOUR LAKE Theft OF Vehicle 2 10639 0.4/01/2001 12:00:00 AM 2020 APR -114.20758 \$1.136835 2020-APR-ARBOUR LAKE-Theft FROM Vehicle POINT [-114.207578305986 51 13:2683555555] POINT [-114.207578305986 51 13:26835555555] POINT [-114.207578305986 51 13:2683555555] POINT [-114.207578305986 51 13:2683555555] POINT [-114.207578270397 51 0.4513068855] POINT [-114.207578270397 51 0.45130688	EAST	APPLEWOOD PARK	Assault (Non-domestic)	1	6981 04/01/2020 12:00:00 AN	2020 APR -1	13.92786	51.044982 2020-APR-APPLEWOOD PARK-Assault (Non-domestic)	POINT (-113.927857644202 51.044981778175)
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NORTHWEST ABBOUL LAKE Theft FROM Vehicle 4 106.99 O4/01/2001 12:00.00 AM 2020 APR -114.20758 51.132633 2020-APR-ARBOUL LAKE-Theft FROM Vehicle POINT [-114.207578305889 5.113263352555.58] NORTHWEST ARBOUR LAKE Theft OF Vehicle 2 106.19 O4/01/2001 12:00.00 AM 2020 APR -114.20758 51.132633 2020-APR-ARBOUR LAKE-Theft OF Vehicle POINT [-114.207578305889 5.113263255555.58] NEST ASPEN WOODS Break & Enter - Dwelling 1 9446 O4/01/2001 12:00.00 AM 2020 APR -114.20758 51.05131 2020-APR-ARPEN WOODS-Resal & Enter - Dwelling POINT [-114.207578270397 5.1045130988851] NEST ASPEN WOODS Theft ROM Vehicle 6 9446 O4/01/2001 12:00.00 AM 2020 APR -114.20758 51.05131 2020-APR-ASPEN WOODS-Break & Enter - Dwelling POINT [-114.207878270397 5.1045130988851] NEST ASPEN WOODS Theft ROM Vehicle 1 9446 O4/01/2001 12:00.00 AM 2020 APR -114.20758 51.05131 2020-APR-ASPEN WOODS-Break & Enter - Dwelling POINT [-114.207878270397 5.1045130988851] NEST ASPEN WOODS Theft OF Vehicle 1 9446 O4/01/2001 12:00.00 AM 2020 APR -114.20758 51.05131 2020-APR-ASPEN WOODS-Break & Enter - Dwelling POINT [-114.207878270397 5.1045130988851] NEST ASPEN WOODS Theft OF Vehicle 1 9446 O4/01/2001 12:00.00 AM 2020 APR -114.20758 51.05131 2020-APR-ASPEN WOODS-Break & Enter - Dwelling POINT [-114.207878270397 5.1045130988851] NEST ASPEN WOODS Theft OF Vehicle 1 25130 O4/01/2001 12:00.00 AM 2020 APR -114.00758 51.037438 2020-APR-ASPEN WOODS-Break & Enter - Dwelling POINT [-114.051388797255 5.1037437926217] NORTHWEST ASPEN WOODS Theft OF Vehicle 1 25130 O4/01/2001 12:00.00 AM 2020 APR -114.005519 51.037438 2020-APR-BEITLINE-Theek & Enter - Dwelling POINT [-114.051588797255 5.1037437926217] NORTHWEST ASPEN WOODS Theft OF Vehicle 25130 O4/01/2001 12:00.00 AM 2020 APR -114.05519 51.037438 2020-APR-BEITLINE-There & Enter - Dwelling POINT [-114.051588797255 5.1037437926217] NORTHWEST ASPEN WOODS Theft OF	EAST	APPLEWOOD PARK	Theft OF Vehicle	1	6981 04/01/2020 12:00:00 AN	2020 APR -1	13.92786	51.044982 2020-APR-APPLEWOOD PARK-Theft OF Vehicle	POINT (-113.927857644202 51.044981778175)
NORTHWEST ARROUN LAKE Theft OF Vehicle 2 105.99 (APL/10.2012 12.00.00 AM, 2020 APR 1.14.20758 51.132.03 2020-APR-ARROUN LAKE-Theft OF Vehicle POINT [-11.4.2075880586 51.132.032565585] NORTHWEST APPRIN WOODS Arround Michael Arround April APRIN WOODS Break & Enter - Dwelling 1 94.66 (APL/10.2012 12.00.00 AM, 2020 APR -114.20788 51.0513.13 2020-APR-ARROUN WOODS-Theft PROM Vehicle POINT [-114.207578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft FROM Vehicle 6 94.66 (APL/10.2012 12.00.00 AM, 2020 APR -114.20788 51.0451.31 2020-APR-ARPEN WOODS-Theft PROM Vehicle POINT [-114.207578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle 1 94.66 (APL/10.2012 12.00.00 AM, 2020 APR -114.20788 1.0451.31 2020-APR-ARPEN WOODS-Theft PROM Vehicle POINT [-114.207578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle 1 94.66 (APL/10.2012 12.00.00 AM, 2020 APR -114.00788 1.0451.31 2020-APR-ARPEN WOODS-Theft OF Vehicle POINT [-114.207578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.207578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.70297 51.0451.3098885] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.70297.55 1.007478.7020.7020] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.70297.55 1.007478.7020.7020] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.7020.7020] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.007578.7020.7020] NWEST APPRIN WOODS Theft OF Vehicle POINT [-114.0	NORTHWEST	ARBOUR LAKE	Break & Enter - Commercial	5	10619 04/01/2020 12:00:00 AN	2020 APR -1	14.20758	51.132633 2020-APR-ARBOUR LAKE-Break & Enter - Commercial	POINT (-114.207578305896 51.132632565563)
WEST ASPEN WOODS ASSAULT (Non-domestic) 1 9446 OA/01/2002 12 0000 AM 2020 APR -114 20788 51 045131 2020 APR ASPEN WOODS-ASSAULT (Non-domestic) POINT (-114 207876270297 51 045130968851) WEST ASPEN WOODS Break & Enter - Dwelling 1 9446 OA/01/200 12 0000 AM 2020 APR -114 20788 51 045131 2020 APR-ASPEN WOODS-Break & Enter - Dwelling POINT (-114 207878720297 51 045130968851) WEST ASPEN WOODS Theft ROM Vehicle 6 9446 OA/01/200 12 0000 AM 2020 APR -114 20788 51 045131 2020 APR-ASPEN WOODS-Theft ROM Vehicle POINT (-114 057878270297 51 045130968851) WEST ASPEN WOODS Theft OF Vehicle 1 9446 OA/01/200 12 0000 AM 2020 APR -114 20788 51 045131 2020 APR-ASPEN WOODS-Theft POW WHICH POINT (-114 057878270297 51 045130968851) WEST ASPEN WOODS Theft OF Vehicle POINT (-114 0578878720297 51 045130968851) WEST ASPEN WOODS Theft OF Vehicle POINT (-114 0578878270297 51 045130968851) WEST ASPEN WOODS Theft OF Vehicle POINT (-114 0578878720297 51 045130968851) WEST ASPEN WOODS Theft OF Vehicle POINT (-114 0578878272097 51 045130968851) WEST ASPEN WOODS Theft OF Vehicle POINT (-114 0578878272097 51 045130968851) WEST WES	NORTHWEST	ARBOUR LAKE	Theft FROM Vehicle	4	10619 04/01/2020 12:00:00 AN	2020 APR -1	14.20758	51.132633 2020-APR-ARBOUR LAKE-Theft FROM Vehicle	POINT (-114.207578305896 51.132632565563)
APPR WOODS Break & Enter - Dwelling 1 9466 (-04)(1/2001 12:000 AM 2020 APR 114.0788 51.05131 2020-APR-ASPEN WOODS-break & Enter - Dwelling POINT (-114.0278873297 51.0513:0988851) WEST APPR WOODS Theft FROM Vehicle 5 9466 (-04)(1/2001 12:000 AM 2020 APR 114.07888 51.051313 2020-APR-ASPEN WOODS-theft FROM Vehicle POINT (-114.027876720797 51.0513:0988851) WEST ASPEN WOODS Theft OF Vehicle 1 9446 (-04)(1/2001 12:000 AM 2020 APR -114.07888 51.051313 2020-APR-ASPEN WOODS-theft OF Vehicle POINT (-114.027876270297 51.04513:0988851) WEST ASPEN WOODS Theft OF Vehicle POINT (-114.027876270297 51.04513:0988851) WEST ASPEN WOODS Theft OF Vehicle POINT (-114.05188797255 51.037497926217) CENTRE BETLINE Break & Enter - Owelling POINT (-114.05188797255 51.037497926217) ENTER BETLINE Break & Enter - Owelling POINT (-114.05188797255 51.037497926217) ENTER BETLINE BRILINE Commercial Robbery 1 25129 (-04)(1/2001 12:0000 AM 2020 APR -114.05519 51.037498 2020-APR-BETLINE-Break & Enter - Owelling POINT (-114.05188797255 51.037497926217) ENTER BETLINE STREET STREE	NORTHWEST	ARBOUR LAKE	Theft OF Vehicle	2	10619 04/01/2020 12:00:00 AN	2020 APR -1	14.20758	51.132633 2020-APR-ARBOUR LAKE-Theft OF Vehicle	POINT (-114.207578305896 51.132632565563)
APEN WOODS	WEST	ASPEN WOODS	Assault (Non-domestic)	1	9446 04/01/2020 12:00:00 AN	2020 APR -1	14.20788	51.045131 2020-APR-ASPEN WOODS-Assault (Non-domestic)	POINT (-114.207876270297 51.045130968851)
APPR WOODS	WEST	ASPEN WOODS	Break & Enter - Dwelling	1	9446 04/01/2020 12:00:00 AN	2020 APR -1	14.20788	51.045131 2020-APR-ASPEN WOODS-Break & Enter - Dwelling	POINT (-114.207876270297 51.045130968851)
CENTRE BEILINE Break & Enter - Commercial 26 25129 OA/01/2002 12:00:00 AM 2020 APR -114.05519 51.037438 2020-APR-BEILINE-Break & Enter - Commercial POINT (-114.055188797256 51.037437926217)	WEST	ASPEN WOODS	Theft FROM Vehicle	6	9446 04/01/2020 12:00:00 AN	2020 APR -1	14.20788	51.045131 2020-APR-ASPEN WOODS-Theft FROM Vehicle	POINT (-114.207876270297 51.045130968851)
CENTER BETLINE Break & Enter - Other Premises 1 25129 0401/200120000 AA 2020 APR -114.05519 51.037438 2020-APR-BETLINE-Break & Enter - Other Premises POINT [-114.055188797256 51.037437926217]	WEST	ASPEN WOODS	Theft OF Vehicle	1	9446 04/01/2020 12:00:00 AN	2020 APR -1	14.20788	51.045131 2020-APR-ASPEN WOODS-Theft OF Vehicle	POINT (-114.207876270297 51.045130968851)
CENTRE BICTLINE Break & Enter - Other Premises 1 25129 04/01/2002 12:00:00 AA 2020 APR -114.05519 51.037438 2020-APR-BEILTLINE-Break & Enter - Other Premises POINT (-114.055188797256 51.037437926217) CENTRE BELTLINE Commercial Robbery 1 25129 04/01/200 12:00:00 AA 2020 APR -114.05519 51.037438 2020-APR-BEILTLINE-Commercial Robbery POINT (-114.055188797256 51.0374397926217) CENTRE BELTLINE Theft ROM Vehicle 59 25129 04/01/200 12:00:00 AA 2020 APR -114.05519 51.037438 2020-APR-BEILTLINE-Theft ROM Vehicle POINT (-114.055188797256 51.0374397926217) CENTRE BELTLINE Theft OF Vehicle 1 25129 04/01/2002 12:00:00 AA 2020 APR -114.05519 51.037438 2020-APR-BEILTLINE-Theft OF Vehicle POINT (-14 055188797256 51.037437926217) CENTRE BELTLINE Theft OF Vehicle 1 25129 04/01/2002 12:00:00 AA 2020 APR -114.05519 51.037438 2020-APR-BEILTLINE-Theft OF Vehicle POINT (-14 055188797256 51.037437926217) CENTRE BELTLINE Violence Other (Non-domestic) 1 25129 04/01/2002 12:00:00 AA 2020 APR -114.05519 51.037438 2020-APR-BEILTLINE-Theft OF Vehicle	CENTRE	BELTLINE	Break & Enter - Commercial	26	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Break & Enter - Commercial	POINT (-114.055188797256 51.037437926217)
CENTRE ELTLINE Commercial Robbery 1 25129 OA/01/2001 12:000 OA 2020 APR -114.05519 51.037438 2020-APR-BEILINE-Commercial Robbery POINT (-141.055188797255 51.037437926217) CENTRE BEILINE Street Robbery 2 25129 OA/01/2001 12:000 OA 2020 APR -114.05519 51.037438 2020-APR-BEILINE-Street Robbery POINT (-141.055188797255 51.037437926217) CENTRE BELLINE Theft PROM Vehicle 59 25129 OA/01/2001 12:0000 AM 2020 APR -114.05519 51.037438 2020-APR-BEILINE-Theft ROM Vehicle POINT (-141.055188797255 51.037437926217) CENTRE BELLINE Theft OF Vehicle 14 25129 OA/01/2001 12:0000 AM 2020 APR -114.05519 51.037438 2020-APR-BEILINE-Theft OF Vehicle POINT (-141.055188797255 51.037437926217) CENTRE BELLINE Theft OF Vehicle 14 25129 OA/01/2001 12:0000 AM 2020 APR -114.05519 51.037438 2020-APR-BEILINE-Theft OF Vehicle POINT (-141.055188797255 51.037437926217) CENTRE BELLINE Theft OF Vehicle 14 25129 OA/01/2001 12:0000 AM 2020 APR -114.05519 51.037438 2020-APR-BEILINE-Theft OF Vehicle POINT (-141.055188797255 51.037437926217)	CENTRE	BELTLINE	Break & Enter - Dwelling	1	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Break & Enter - Dwelling	POINT (-114.055188797256 51.037437926217)
CENTRE Street Robbery 2 25129 04/01/2020 12:00:00 AM 2020 APR -114.05519 51.037438 2020-APR-BEILTINE-Street Robbery POINT (-114.055188797256 51.037437926217) CENTRE BETLINE Theft ROM Vehicle 59 25129 04/01/2002 12:00000 AM 2020 APR -114.05519 51.037438 2020-APR-BEILTINE-Theft ROM Vehicle POINT (-114.055188797256 51.037437926217) CENTRE BETLINE Theft OF Vehicle 14 25129 04/01/2002 12:00:00 AM 2020 APR -114.05519 51.037438 2020-APR-BEILTINE-Theft OF Vehicle POINT (-114.055188797256 51.037437926217) CENTRE BETLINE Violence Other (Non-domestic) 1 25129 04/01/2002 12:00:00 AM 2020 APR -114.05519 51.037438 2020-APR-BEILTINE-Theft OF Vehicle POINT (-114.055188797256 51.037437926217)	CENTRE	BELTLINE	Break & Enter - Other Premises	1	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Break & Enter - Other Premises	POINT (-114.055188797256 51.037437926217)
CENTRE BEITLINE Theft ROM Vehicle 59 25129 O4/01/2020 12:0000 AM 2020 APR -114 05519 \$1.037438 2020-APR-BEITLINET-Theft ROM Vehicle POINT (-114 055188797256 51.037437926217) CENTRE BETLINE Theft Of Vehicle 14 25129 04/01/2020 12:0000 AM 2020 APR -114 05519 \$1.037438 2020-APR-BEITLINET-Theft OF Vehicle POINT (-114 055188797256 51.037437926217) CENTRE BELINE Violence Other (Non-domestic) 1 25129 04/01/2020 12:0000 AM 2020 APR -114 05519 51.037438 2020-APR-BEITLINET-Theft OF Vehicle POINT (-114 055188797256 51.037437926217)	CENTRE	BELTLINE	Commercial Robbery	1	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Commercial Robbery	POINT (-114.055188797256 51.037437926217)
CENTRE BELTUNE Theft OF Vehicle 14 25129 04/01/2020 12:00:00 AA 2020 APR -114:05519 51.037438 2020-APR-BELTUNE-Theft OF Vehicle POINT (-114:055188797256 51:037437926217) CENTRE BELTLINE Violence Other (Non-domestic) 1 25129 04/01/2020 12:00:00 AM 2020 APR - 114:05519 51.037438 2020-APR-BELTLINE-Violence Other (Non-domestic) POINT (-114:055188797256 51:037437926217)	CENTRE	BELTLINE	Street Robbery	2	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Street Robbery	POINT (-114.055188797256 51.037437926217)
CENTRE BELTLINE Violence Other (Non-domestic) 1 25129 04/01/2020 12:00:00 AA 2020 APR -114.05519 51.037438 2020-APR-BELTUNE-Violence Other (Non-domestic) POINT (-114.055188797256 51.037437926217)	CENTRE	BELTLINE	Theft FROM Vehicle	59	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Theft FROM Vehicle	POINT (-114.055188797256 51.037437926217)
	CENTRE	BELTLINE	Theft OF Vehicle	14	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Theft OF Vehicle	POINT (-114.055188797256 51.037437926217)
SOUTH BONAVISTA DOWNS Break & Enter - Other Premises 1 928 04/01/2020 12:00:00 AA 2020 APR -114.0314 50.943698 2020-APR-BONAVISTA DOWNS-Break & Enter - Other Premises POINT (-114.03139999055 50.943697683039)	CENTRE	BELTLINE	Violence Other (Non-domestic)	1	25129 04/01/2020 12:00:00 AN	2020 APR -1	14.05519	51.037438 2020-APR-BELTLINE-Violence Other (Non-domestic)	POINT (-114.055188797256 51.037437926217)
	SOUTH	BONAVISTA DOWNS	Break & Enter - Other Premises	1	928 04/01/2020 12:00:00 AN	2020 APR -	114.0314	50.943698 2020-APR-BONAVISTA DOWNS-Break & Enter - Other Premises	POINT (-114.03139999056 50.943697683039)

Methodology

K-means clustering was used to compartmentalize category of venues found for each community.

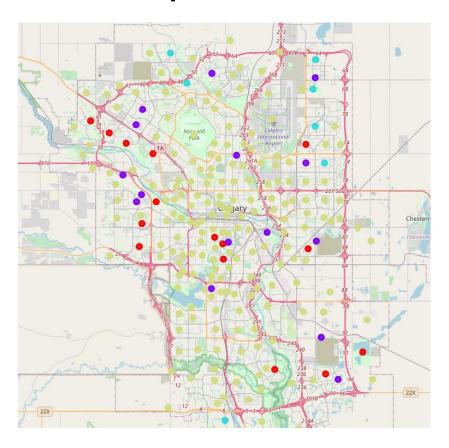
Data Type = categorical

Number of clusters = 4

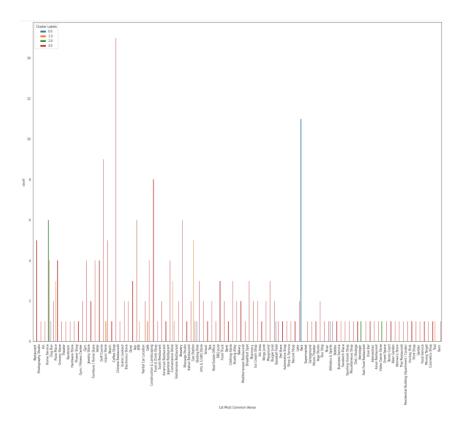
	Category	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Break & Enter - Commercial	3.0	Restaurant	Clothing Store	Women's Store	Food Truck	Gift Shop	German Restaurant	General Entertainment	Gastropub	Gas Station	Garden Center
1	Break & Enter - Commercial	3.0	Photography Studio	Grocery Store	Bus Station	Residential Building (Apartment / Condo)	Lake	Women's Store	Garden	Frozen Yogurt Shop	Furniture / Home Store	Gaming Cafe
2	Break & Enter - Commercial	3.0	Inn	BBQ Joint	Pizza Place	Park	Coffee Shop	Seafood Restaurant	Steakhouse	Baseball Stadium	High School	Liquor Store
3	Break & Enter - Commercial	3.0	Home Service	Light Rail Station	Rock Club	Train Station	Food Service	Food Truck	French Restaurant	Fried Chicken Joint	Frozen Yogurt Shop	Women's Store
4	Break & Enter - Commercial	3.0	Dog Run	Massage Studio	Women's Store	French Restaurant	Gluten-free Restaurant	Gift Shop	German Restaurant	General Entertainment	Gastropub	Gas Station
273	Break & Enter - Commercial	3.0	Construction & Landscaping	Baseball Field	Furniture / Home Store	Chinese Restaurant	Women's Store	French Restaurant	Gift Shop	German Restaurant	General Entertainment	Gastropub
274	Break & Enter - Commercial	1.0	Trail	Women's Store	Food Truck	Gluten-free Restaurant	Gift Shop	German Restaurant	General Entertainment	Gastropub	Gas Station	Garden Center
275	Break & Enter - Commercial	2.0	Home Service	Women's Store	Golf Course	Gift Shop	German Restaurant	General Entertainment	Gastropub	Gas Station	Garden Center	Garden
276	Break & Enter - Commercial	3.0	Pub	Bus Station	Ice Cream Shop	History Museum	Women's Store	French Restaurant	German Restaurant	General Entertainment	Gastropub	Gas Station
277	Break & Enter - Commercial	3.0	Farm	Business Service	Women's Store	French Restaurant	Gift Shop	German Restaurant	General Entertainment	Gastropub	Gas Station	Garden Center

Results

- The resulting clusters were plotted on a Folium Map



- 1st most common venues were mapped on a countplot using seaborn



Results and Recommendations

Results – Most common venues

- Cluster 0: Parks, Skating Rinks, Dog Runs, Baseball Field
- Cluster 1: Home Service, Gas station, Pizza Place, Convenience Store
- Cluster 2: Home Service, video game store, astrologer
- Cluster 3: Diner, Construction and Landscaping, Restaurant, Hotel.

Recommendations

- In cluster 0, businesses such as skating rinks and sporting complexes are most effected by commercial crimes.
- In cluster 1, small size commercial shops such as gas stations, pizza shops, convenience stores are more effected by commercial crimes
- In Cluster 2, businesses run out of home space are most effected by commercial crimes.
- In Cluster 3, commercial lounging services are most effected by commercial crimes.

Conclusion

- We can conclude from our study that there is a pattern in the data provided by foursquare API
- Recommendations to our targeted audience based on the patterns found in each clusters was made.
- Further improvements such as using elbow method to predict number of clusters can be done next time.