PART 1 Introduction

Background:

The city of Toronto is the most popular city in Canada. People around the world have been attracted to be here. In 2007 Toronto has been awarded as the most safest city by economist magazine. However, we cannot overlook the uncovered side of this city. From the recent research, there is an increasing number of crime rate in Canada, even if crime in Toronto has been relatively average compared with other major cities. In this report, the topic regarding public safe, especially different types of crimes in Toronto, will be taken into consideration. The various neighborhoods in Toronto will also be explored. The insights derived from relevant data will provide readers a better understanding of public safety in Toronto which could help, for instance, to select the proper living area from nearly 170 neighborhoods.

Business Problem:

How many and what neighborhoods are shaped in Toronto?
What is the population density in each neighborhood?
The number of the different type of crime risks in 2019 from all neighborhoods
Which kind of neighborhoods are classified with similar crime risks?

Target Audience:

The purpose of this project is to help me to get a good understanding of the situation of public safety in 2009 in Toronto. Through the comparison of all neighborhoods, the different crime risks will be detected, which support people for further decisions. For instance, to investigate behind what caused the high risks in the specific area, to find the safest neighborhood, or to take the effective measures to avoid the crime cases happening again.

PART 2

Toronto police service public safety data portal

https://opendata.arcgis.com/datasets/af500b5abb7240399853b35a2362d0c0_0.geojson

The data set contains Toronto's neighborhoods, population, the types of crime risks
(including assault, auto theft, break and enter, robbery), area size, longitude and latitude.

	Neighborhood	Population	Assault 2019	Assault Rate 2019	AutoTheft 2019	AutoTheft Rate 2019	BreakandEnter 2019	BreakandEnter Rate 2019	Robbery 2019	Robbery Rate 2019
0	Yonge-St.Clair	12528	295.3	37	6	47.9	28	223.5	4	31.9
1	York University Heights	27593	1340.9	370	144	521.9	108	391.4	79	286.3
2	Lansing-Westgate	16164	445.4	72	32	198.0	39	241.3	11	68.1
3	Yorkdale-Glen Park	14804	1411.8	209	61	412.1	84	567.4	42	283.7
4	Stonegate-Queensway	25051	327.3	82	34	135.7	64	255.5	22	87.8

The venues in the neighborhoods will be provided with the input of Toronto geographical
coordinated by Foursquare API.

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Yonge-St.Clair	43.688762	-79.399013	LCBO	43.686991	-79.399238	Liquor Store
1	Yonge-St.Clair	43.688762	-79.399013	The Market By Longo's	43.686711	-79.399536	Supermarket
2	Yonge-St.Clair	43.688762	-79.399013	The Bagel House	43.687374	-79.393696	Bagel Shop
3	Yonge-St.Clair	43.688762	-79.399013	Daeco Sushi	43.687838	-79.395652	Sushi Restaurant
4	Yonge-St.Clair	43.688762	-79.399013	Mary Be Kitchen	43.687708	-79.395062	Restaurant