

Course Project - Milestone 5

Topic	Introduction & Target Audience	Most affected Neighbourhood in Toronto	Incidents Occured in Different Time Periods	Trends in Shooting & Firearm Discharge instances in Toronto ..	Glenfield-Jane Heights and Black Creek Two Neighbouring Hoods ..	Highest Number of Incidents ..
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Course Project

BAN140

Introduction to Data Visualization





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INTRODUCTION

- ★ Shootings and Firearm Discharge events
- ★ Public Safety Data Portal of the Toronto Police Service
- ★ Provides some insights around incidents listed as unsolved after an investigation
- ★ 5,535 Records in the Dataset



Figure 1: Definition of Shooting Incidents

TARGET AUDIENCE

The Target audience for this presentation would be the **Toronto Police Service** and the citizens of **Toronto**.

The analysis that we have done will prove to be useful to the Police department in making strategic plans, analyze the trends and give an overview of regions where more police force is required.

The residents of Toronto can also make use of the data to understand how dangerous few neighbourhoods are and when to avoid walking down the streets.

Toronto police department can take data driven decisions by using the visualizations we have built.



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Most affected Neighbourhood in Toronto

The bar chart depicts the most affected neighbourhoods in Toronto, Canada from 2004 till date. The y-axis has the neighbourhood names and the x-axis contains the number of shooting occurrences.

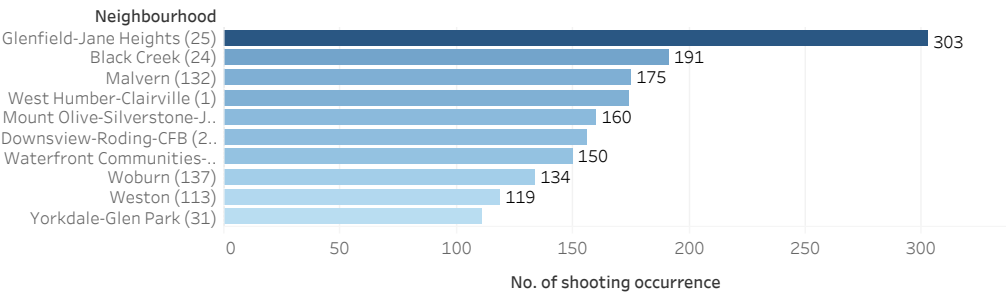
Key Findings: Black Creek, Mount Olive-Silverstone-Jamestown, Glenfield-Jane-Heights, West Humber-Clareville, Kensington-Chinatown & Rouge are the most affected neighborhoods.

Recommendation: Elders in the neighborhood should be vigilant about the firearm access to youth and individuals who are at risk of harming themselves or others. Expand access to high quality, culturally competent, coordinated, social, emotional, and mental health supports and address the impact of trauma.

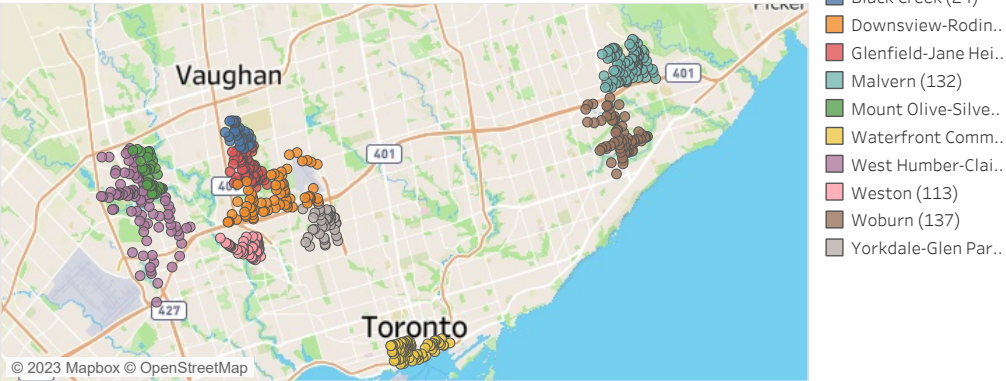
Top 10 Neighbourhood 10

Neighbourhood All

Most affected Neighborhood in Toronto due to Shooting & Firearm instances



Geo Location of Shooting and Arms Discharge in Most Affected Neighbourhood



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in Different Time Periods

The tabular representation depicts the incidents that occur in different time periods in Toronto. Incidents that occurred in different periods show morning recorded the least no. of shooting occurrences whereas evening and night recorded the highest number of deaths and injuries. The afternoon period records were very similar in numbers to evening and night in terms of injuries. About 4% of events occur during the weekends and usually during the evenings or nights.

Line chart indicates the monthly instances. July indicated most number of injuries and death. During winter the crime rate decreases as depicted by the line graph

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Time of Day is Safe to Step Out of Streets

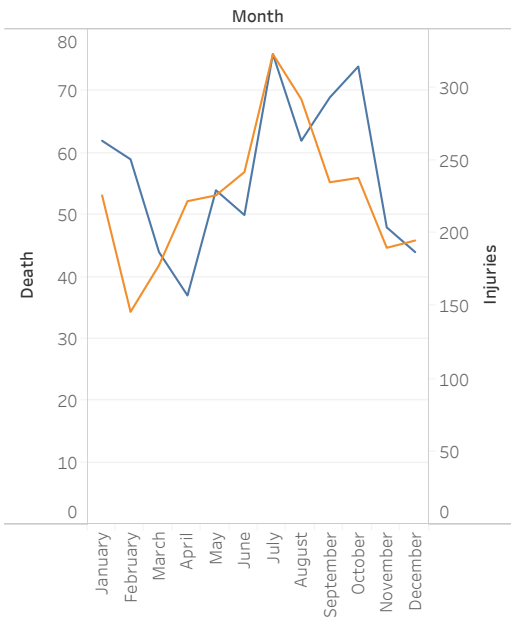
Time Range	Day of week	Death	Injuries
Afternoon	Sunday	18.0	78.0
	Monday	21.0	62.0
	Tuesday	21.0	61.0
	Wednesday	11.0	57.0
	Thursday	11.0	55.0
	Friday	24.0	71.0
Evening	Saturday	16.0	66.0
	Sunday	44.0	135.0
	Monday	45.0	169.0
	Tuesday	36.0	145.0
	Wednesday	36.0	162.0
	Thursday	32.0	160.0
Morning	Friday	49.0	154.0
	Saturday	39.0	170.0
	Sunday	10.0	19.0
	Monday	2.0	20.0
	Tuesday	2.0	13.0
	Wednesday	4.0	16.0
Night	Thursday	3.0	25.0
	Friday	8.0	18.0
	Saturday	5.0	20.0
	Sunday	77.0	266.0
	Monday	27.0	146.0
	Tuesday	22.0	107.0

Day of week All

Time Range All

Death Injuries

Trends of shooting and firearms instance monthly occurrence in Toronto 2004 to 2022



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Trends in Shooting & Firearm Discharge instances in Toronto 2004-2022

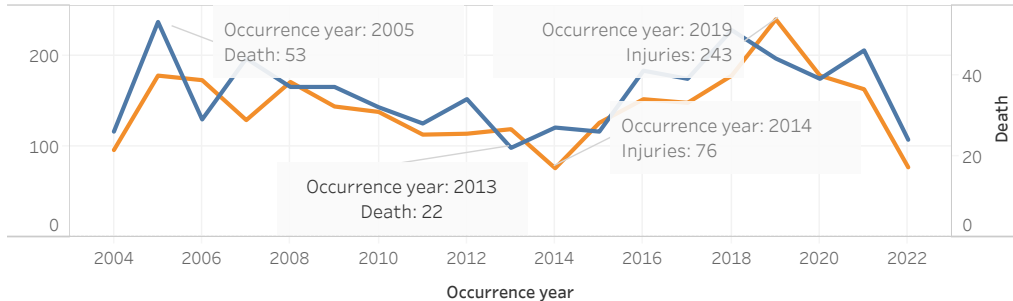
The visualization that we came up with was a line graph depicting the inconsistency & discrepancies in the trends of shooting and firearm discharge incidents that occurred in Toronto over several years from 2004 till date.

The deaths and injuries numbers gradually increased from 2014 until 2020 and later in 2021 and 2022 started to drastically decrease.

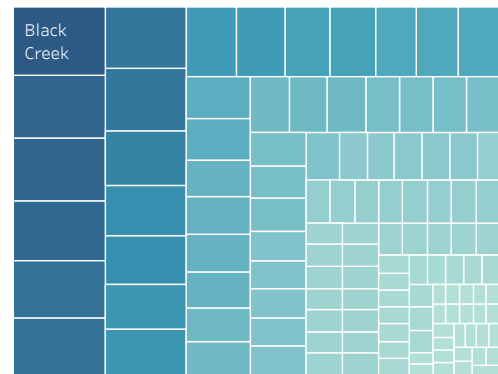
The chart here helps in identifying the most dangerous localities in Toronto, Canada. Death and Injury measure has been considered for this chart.

Recommendation: The Toronto Police Department can carry out more campaigns in the neighborhoods identified above which would make people aware about the crimes and the criminals.

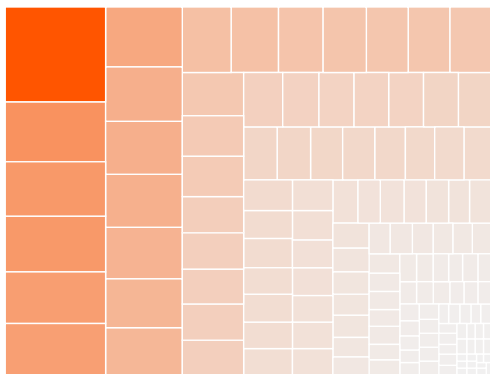
Trend of Shooting & Firearm discharge instances occurred in Toronto 2004 to 2022



Death Count by Neighbourhood



Injury Count by Neighbourhood



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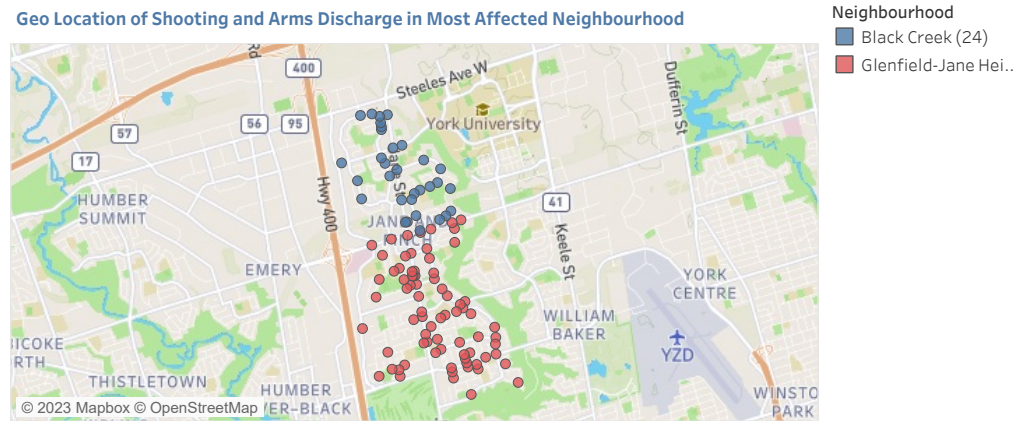
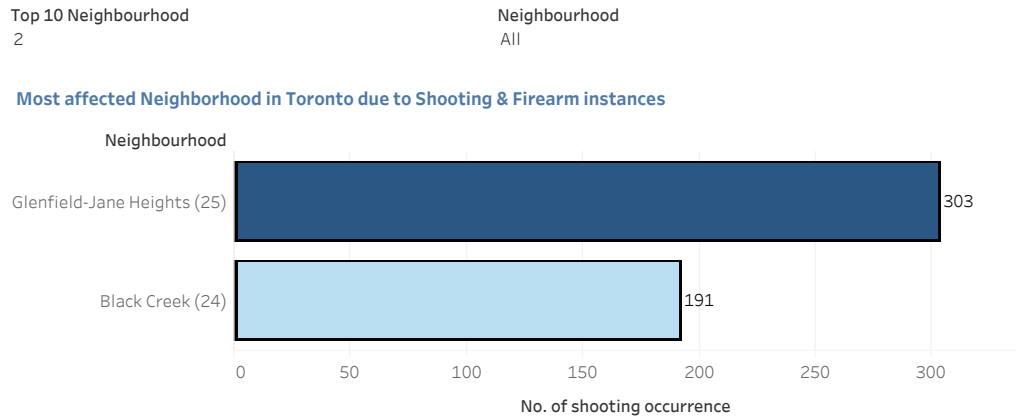
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Glenfield-Jane Heights and Black Creek Two Neighbouring Hoods with most shooting occurrence

The two neighbourhoods have reported the most shooting occurrence. These two hoods share a common boundary and the conflicts has increased over the years.

Recommendations:
The Toronto Police Department can carry out more campaigns in the neighborhoods identified above which would make people aware about the crimes and the criminals.

Good Samaritans should be appointed from these neighborhoods, who can keep a close eye on these suspicious activities and inform the police about any mishappenings at the earliest.



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Highest Number of Incidents Occured in the Night Time Period

The tabular representation depicts the incidents that occur in Night time periods in Toronto. Incidents that occurred in night periods showed the highest number of deaths and injuries.

The Toronto Police department can utilize this visualization to come up with policies around this issue.

Affected neighborhoods should write a petition to the elected government official to hold the gun industry accountable and ensure there is adequate oversight over the marketing and sales of guns and ammunition.

Time of Day is Safe to Step Out of Streets

Time Range	Day of week	Death	Injuries
Night	Sunday	77.0	266.0
	Monday	27.0	146.0
	Tuesday	22.0	107.0
	Wednesday	27.0	79.0
	Thursday	20.0	91.0
	Friday	22.0	124.0
	Saturday	47.0	224.0

Day of week All

Time Range Night

Death Injuries

Trends of shooting and firearms instance monthly occurrence in Toronto 2004 to 2022

