



Toronto Crime Analysis: CSI Toronto

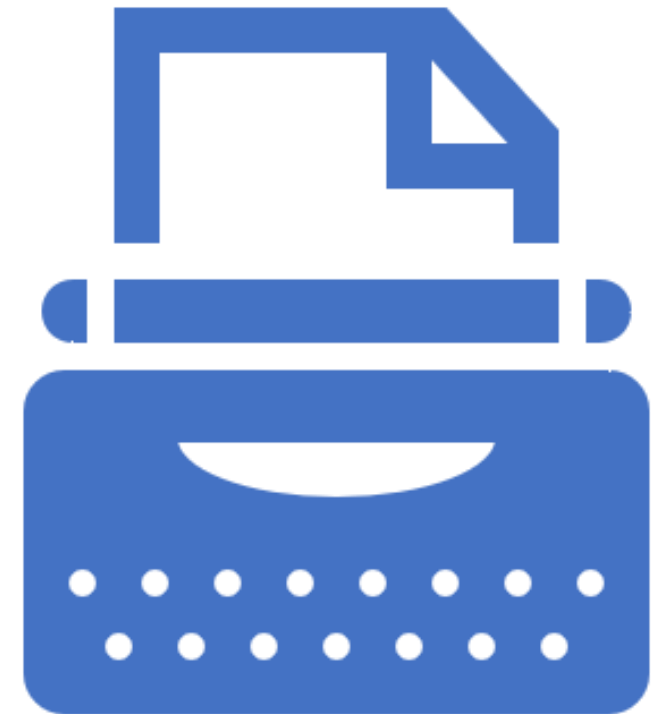
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- Neha Nayeem

Project Description

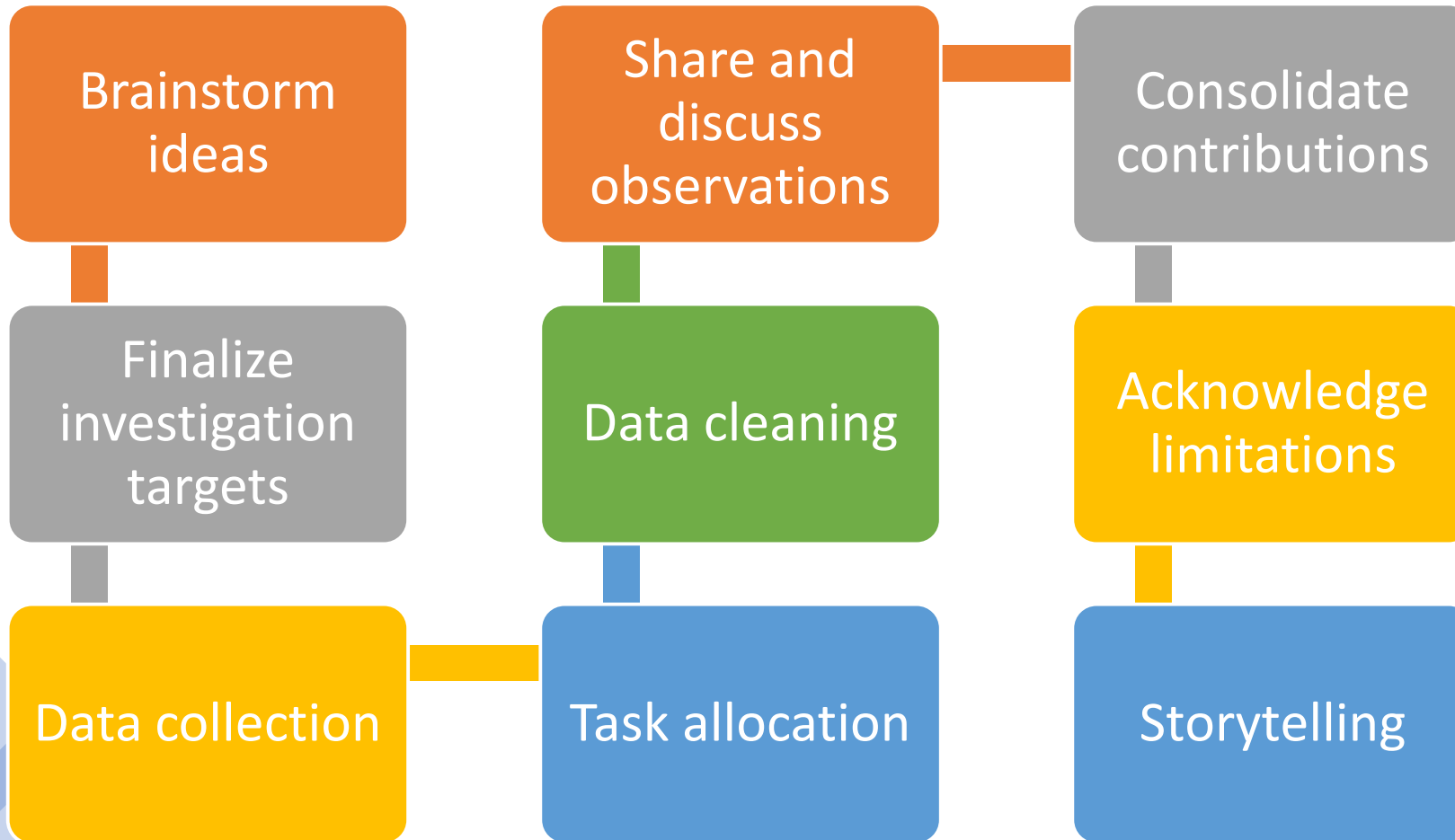
As a newcomer to Toronto, I want to live in a safe and friendly neighborhood.

But,

- How can I know which place is safer?
- How should I locate those neighborhood?
- How can I confirm if that place is always safe?



Process and Decision Making





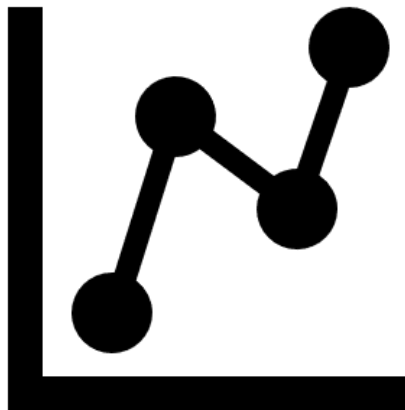
Our investigation targets

1. A) Most/least common types of crimes
B) Total # of crimes and trends
2. A) Seasonality of crimes
B) Frequency of crimes
3. A) Safest and Most Dangerous Neighborhood
B) Proximity to Police Stations
C) Location patterns for specific type of crimes
4. Premises type for specific crimes
5. Correlation of crime with GDP

Data Cleaning and Limitations

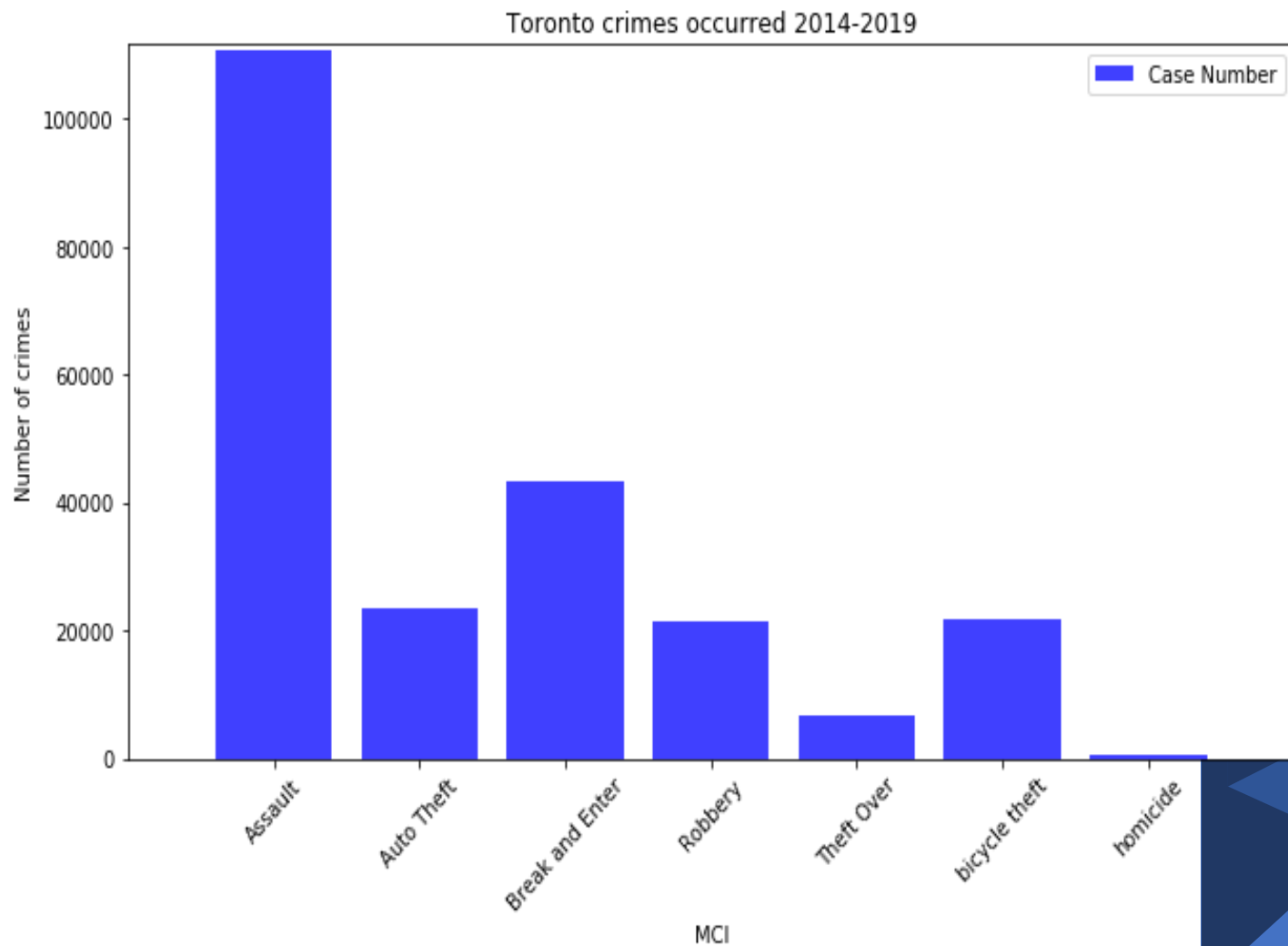
Data Cleaning

- Data resource: Toronto Police Open Data
- Merged and reorganized
- Standardized in constant format

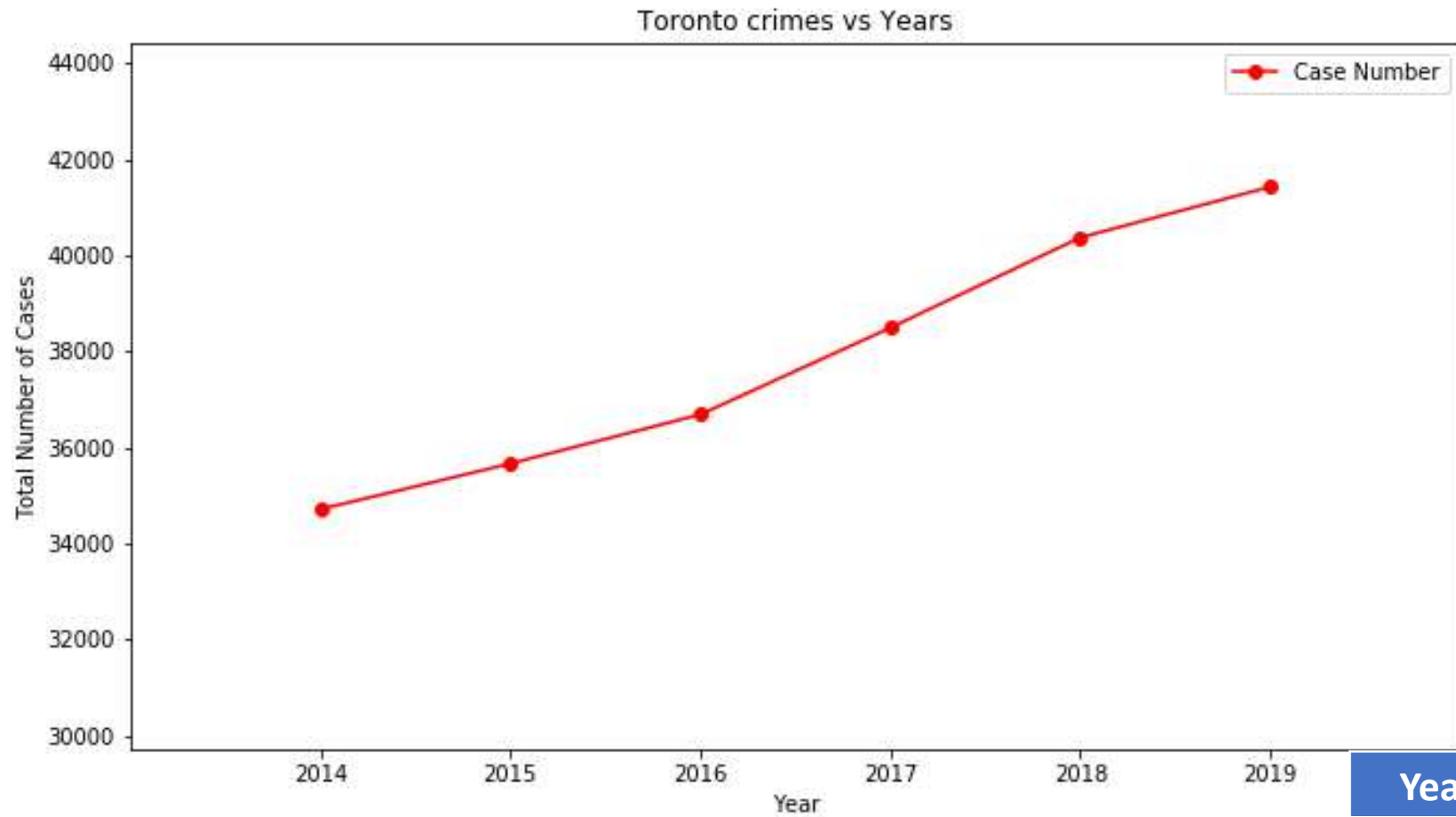


Limitations

- Unavailable dataset and missing information in the raw dataset
- Limited economy data

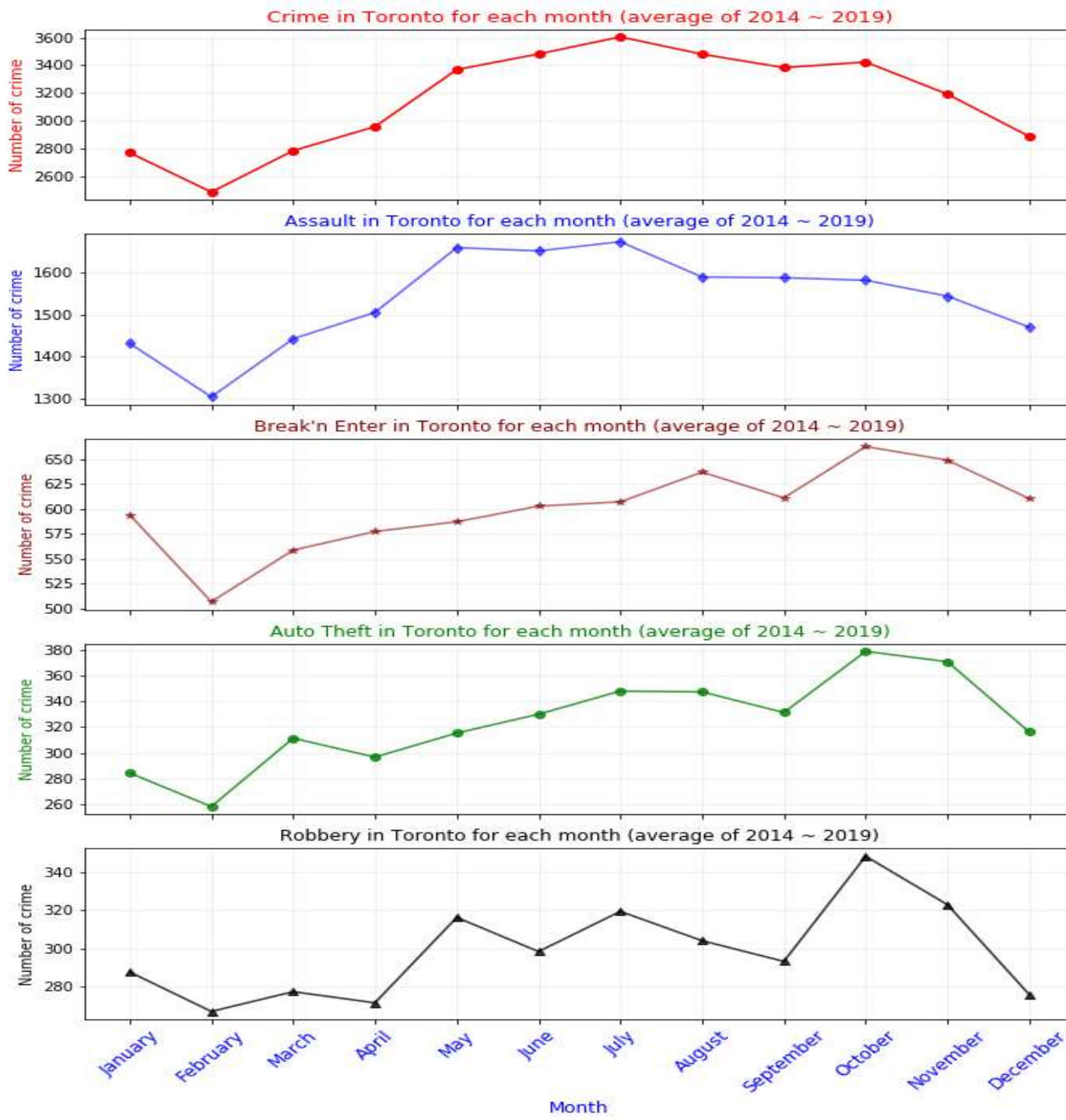


Toronto
Crimes
2014~2019



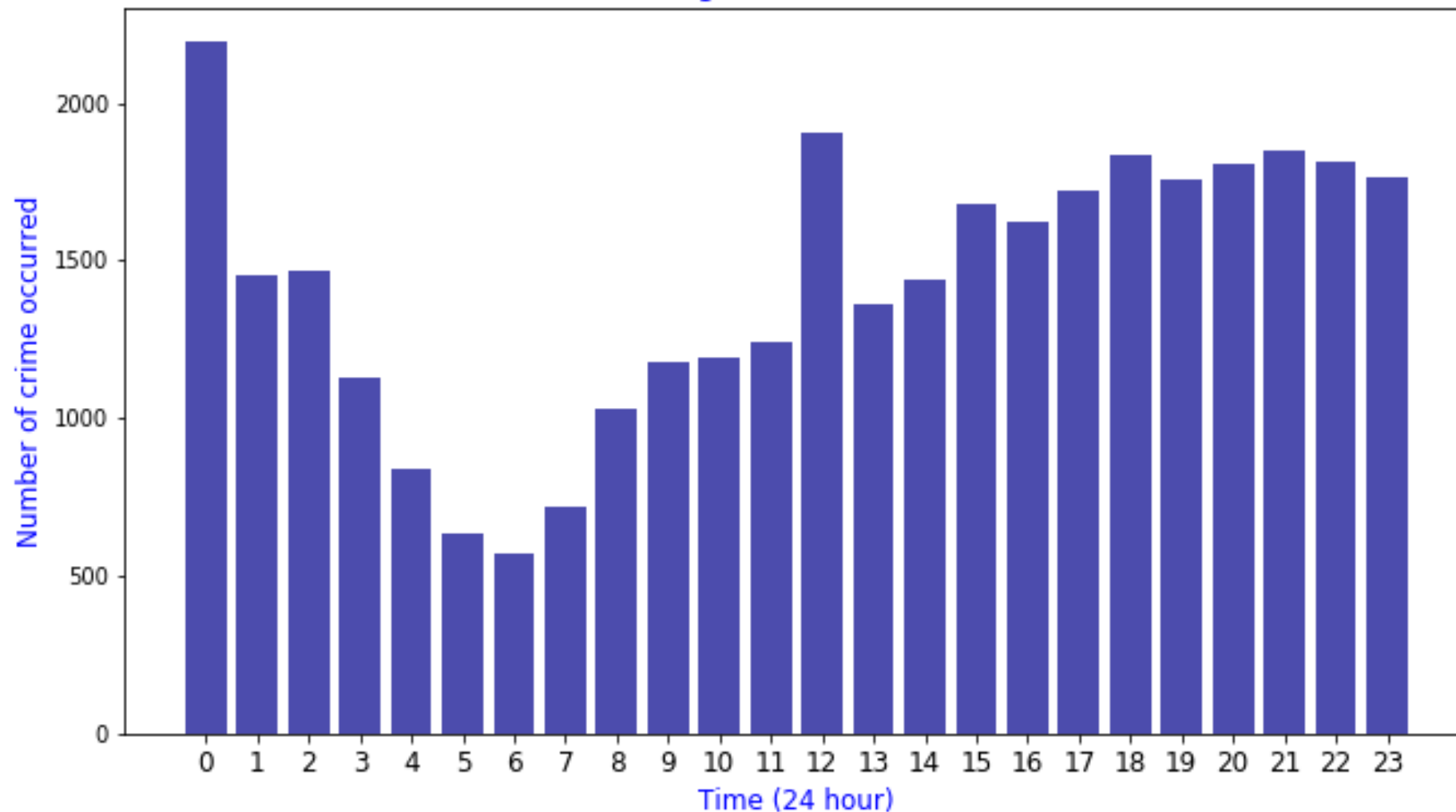
Toronto Crimes 2014~2019

Year	Total Number	Percentage Change
2014	34,710	
2015	35,660	2.74%
2016	36,684	2.87%
2017	38,489	4.92%
2018	40,368	4.88%
2019	41,425	2.62%



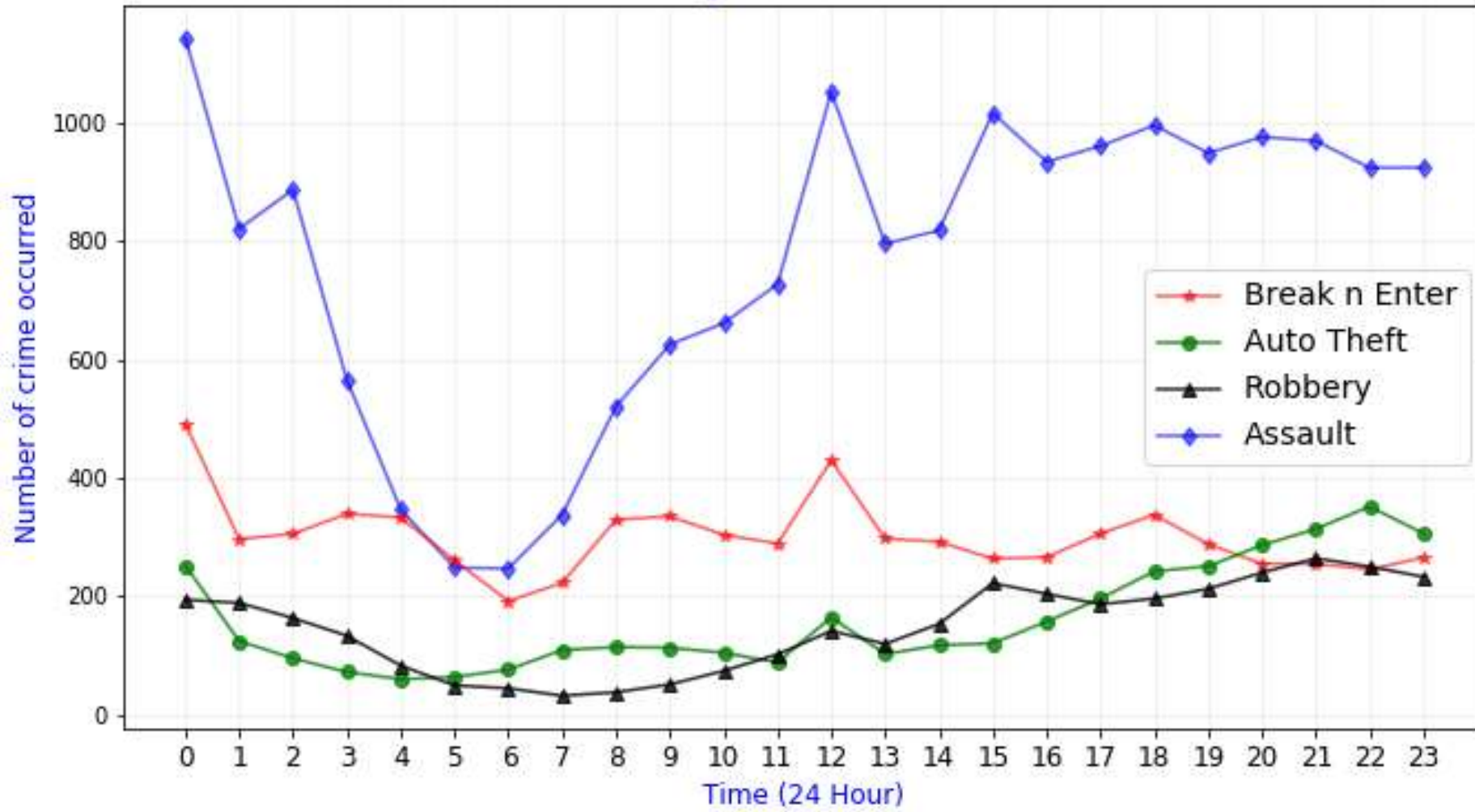
Seasonality of Crimes (monthly)

Number of major crime in Toronto by Time
(average of 2014 ~ 2019)



Frequency
of crimes
in a day
(24 hours)

Number of crimes in Toronto by Time
(average of 2014 ~ 2019)



Frequency
of crimes
in a day
(24 hours)

Map

Satellite



Neighborhood Investigation

- Black/red symbols indicate crime hotspots - the most dangerous neighbourhoods in the city of Toronto.
- Green symbols indicate the top 10 neighbourhoods with the least crimes, and therefore the most safe.

Map Satellite

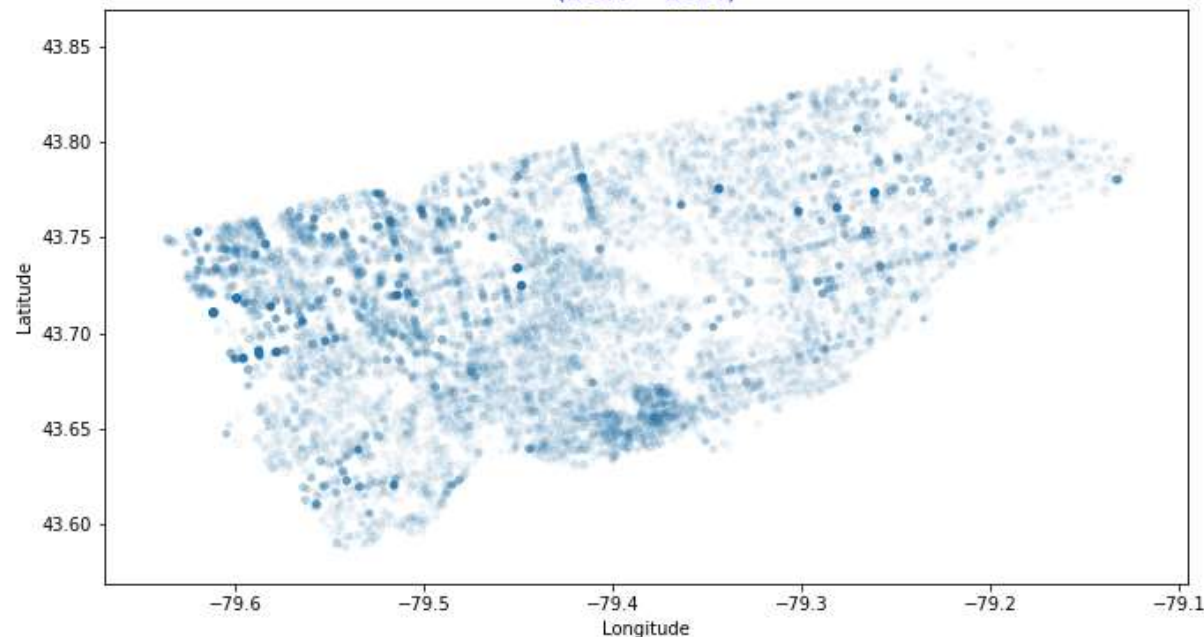


Neighborhood Investigation

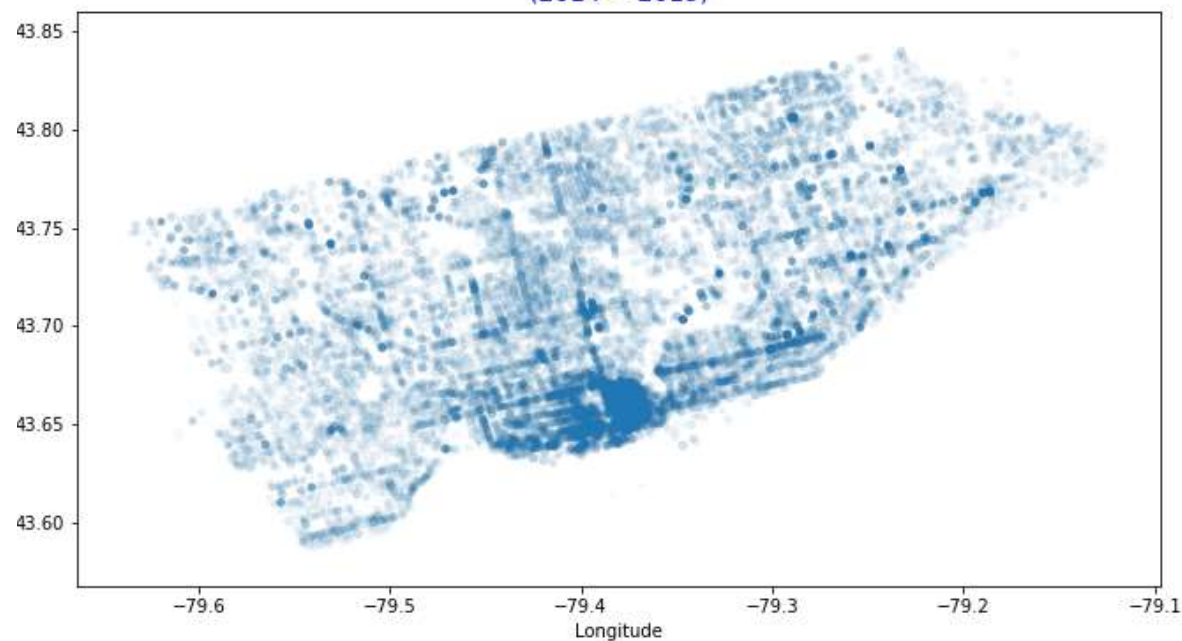


Neighborhood Investigation by Crime type

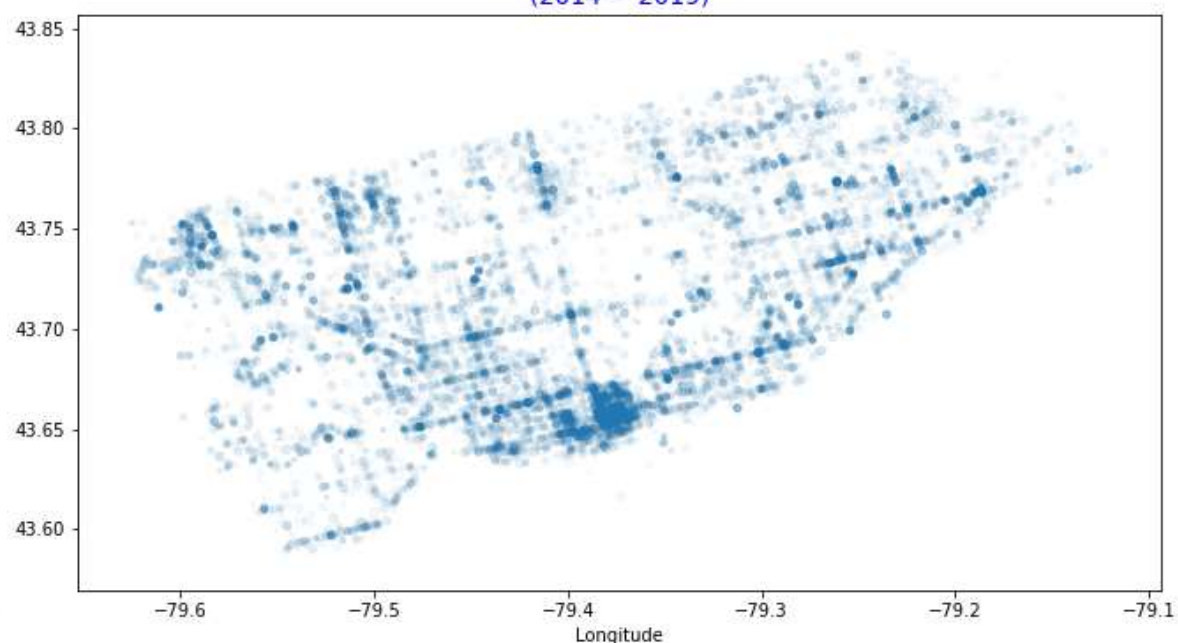
Auto Theft in Toronto
(2014 ~ 2019)

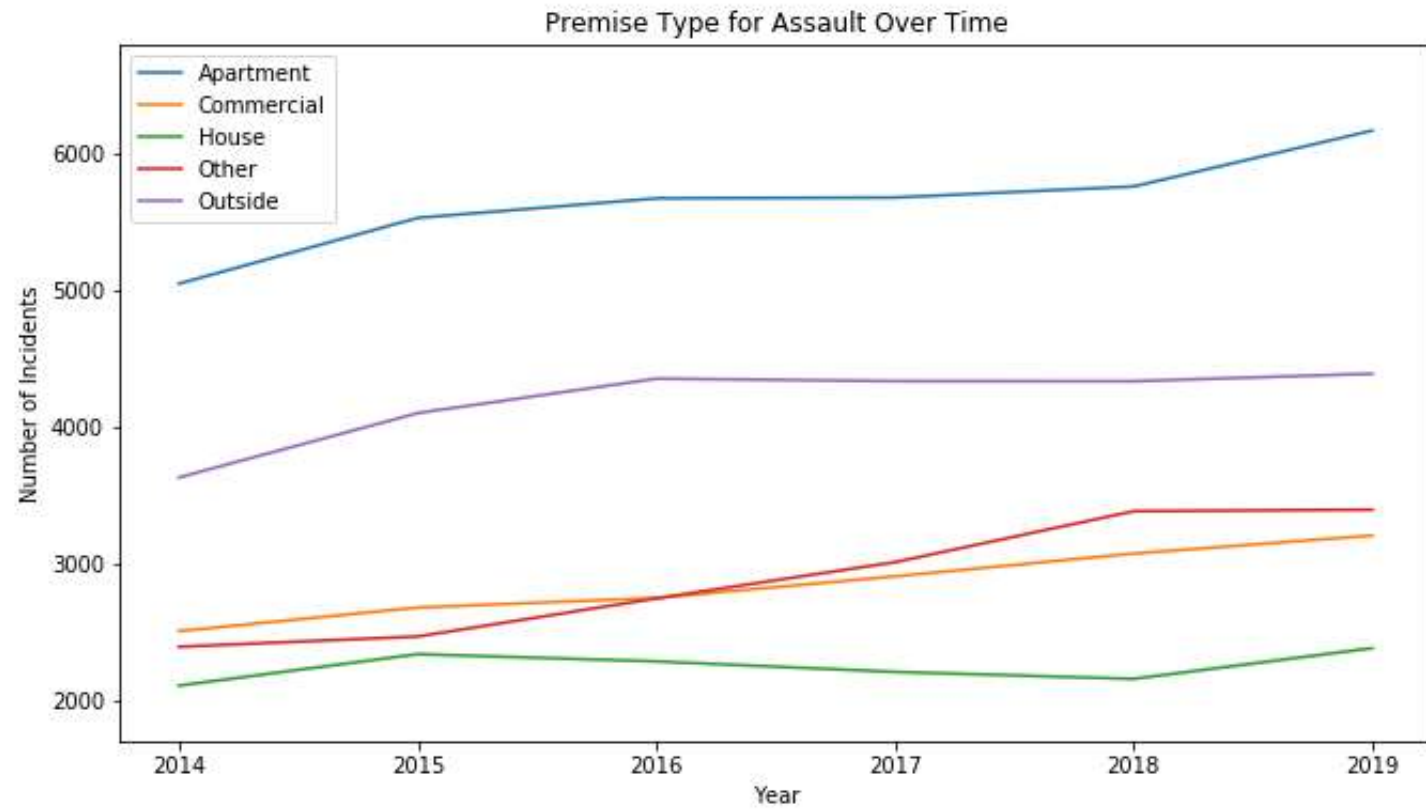
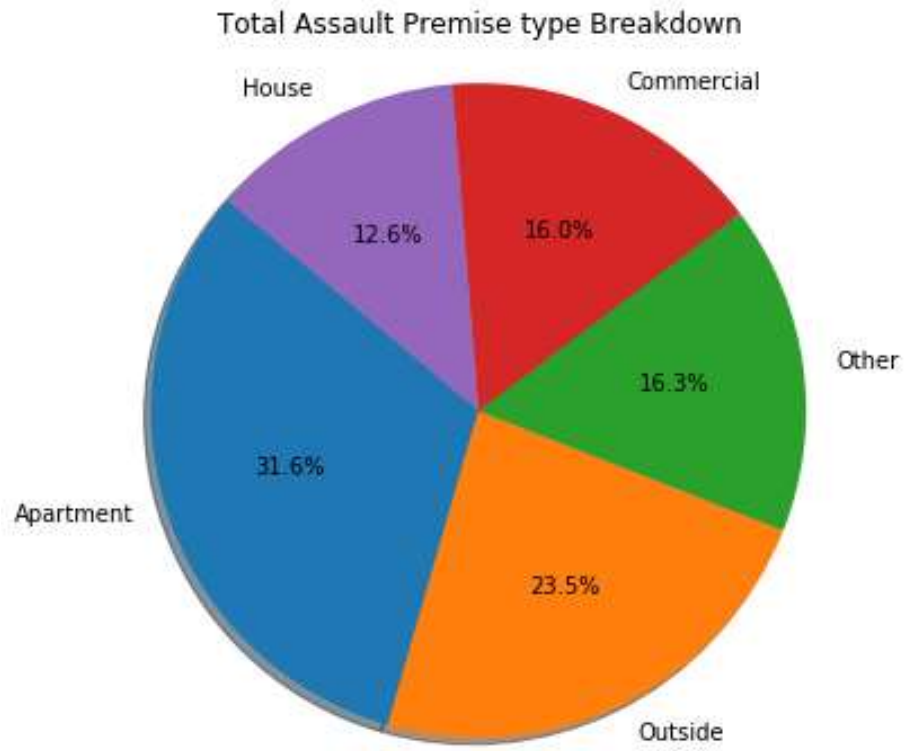


Break n Enter in Toronto
(2014 ~ 2019)



Robbery in Toronto
(2014 ~ 2019)

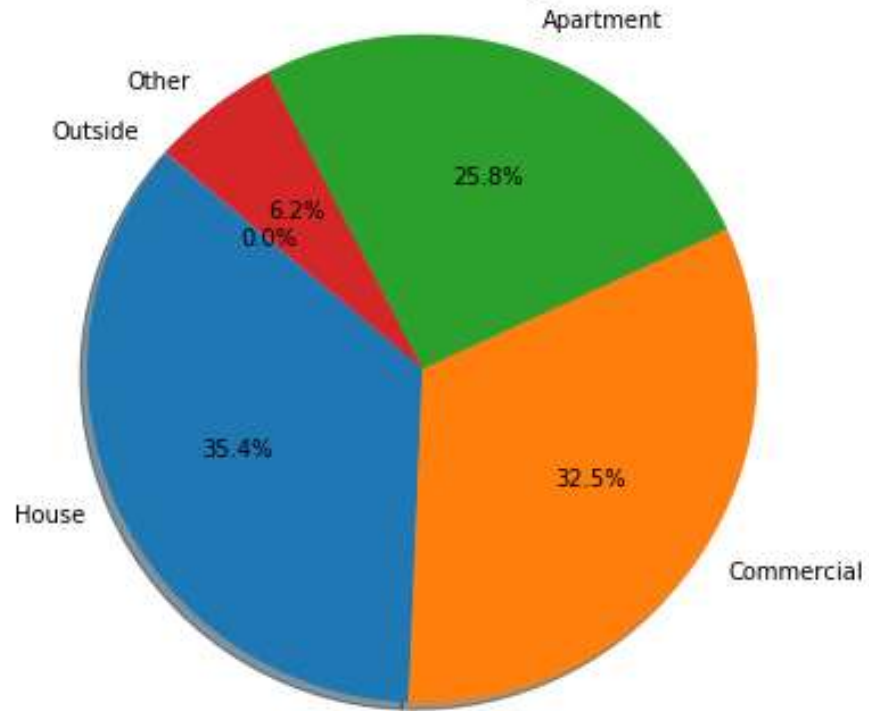




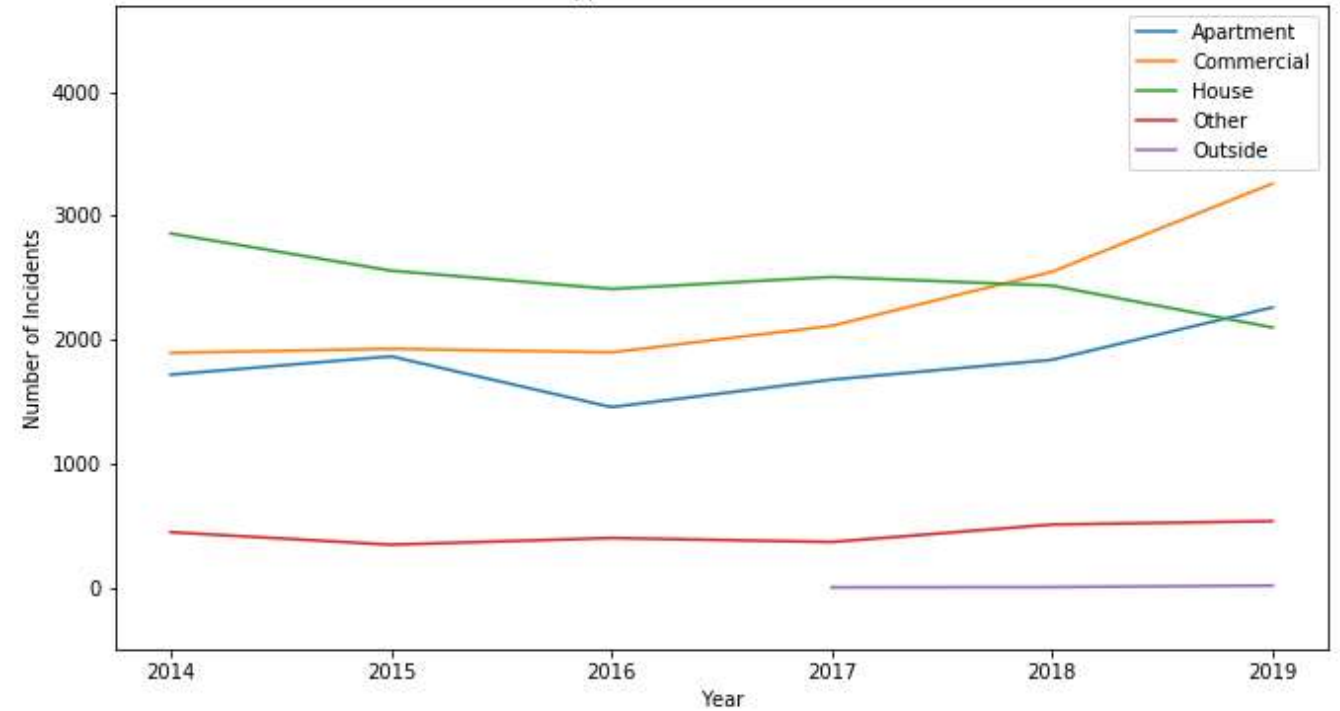
Premise Type Investigation

Assault

Total Break and Enter Premise type Breakdown

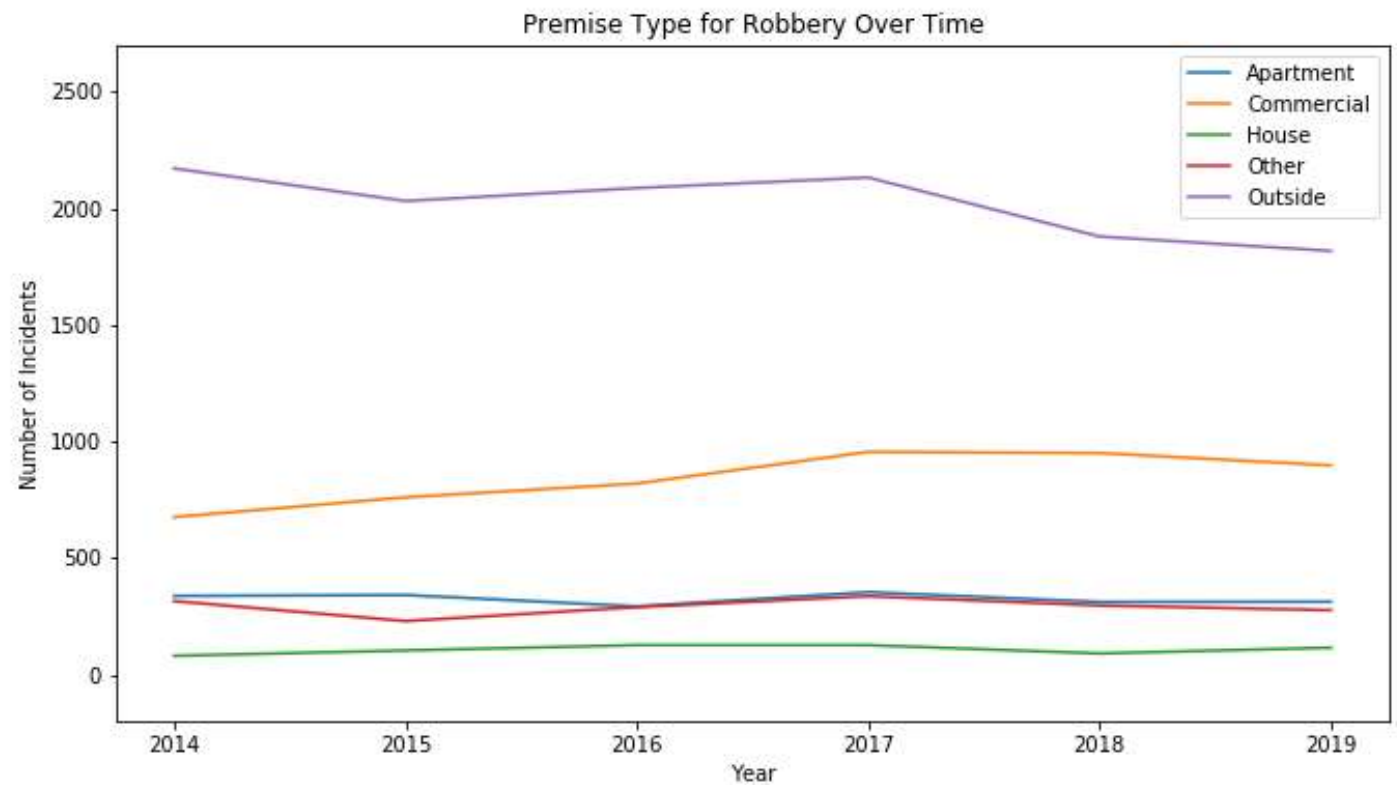
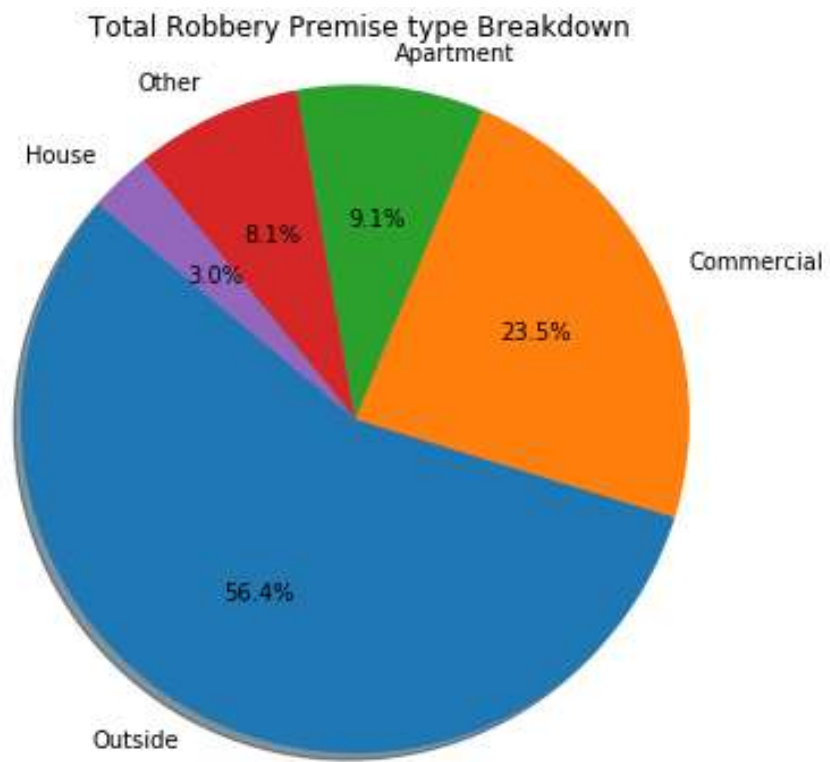


Premise Type for Break and Enter Over Time



Premise Type Investigation

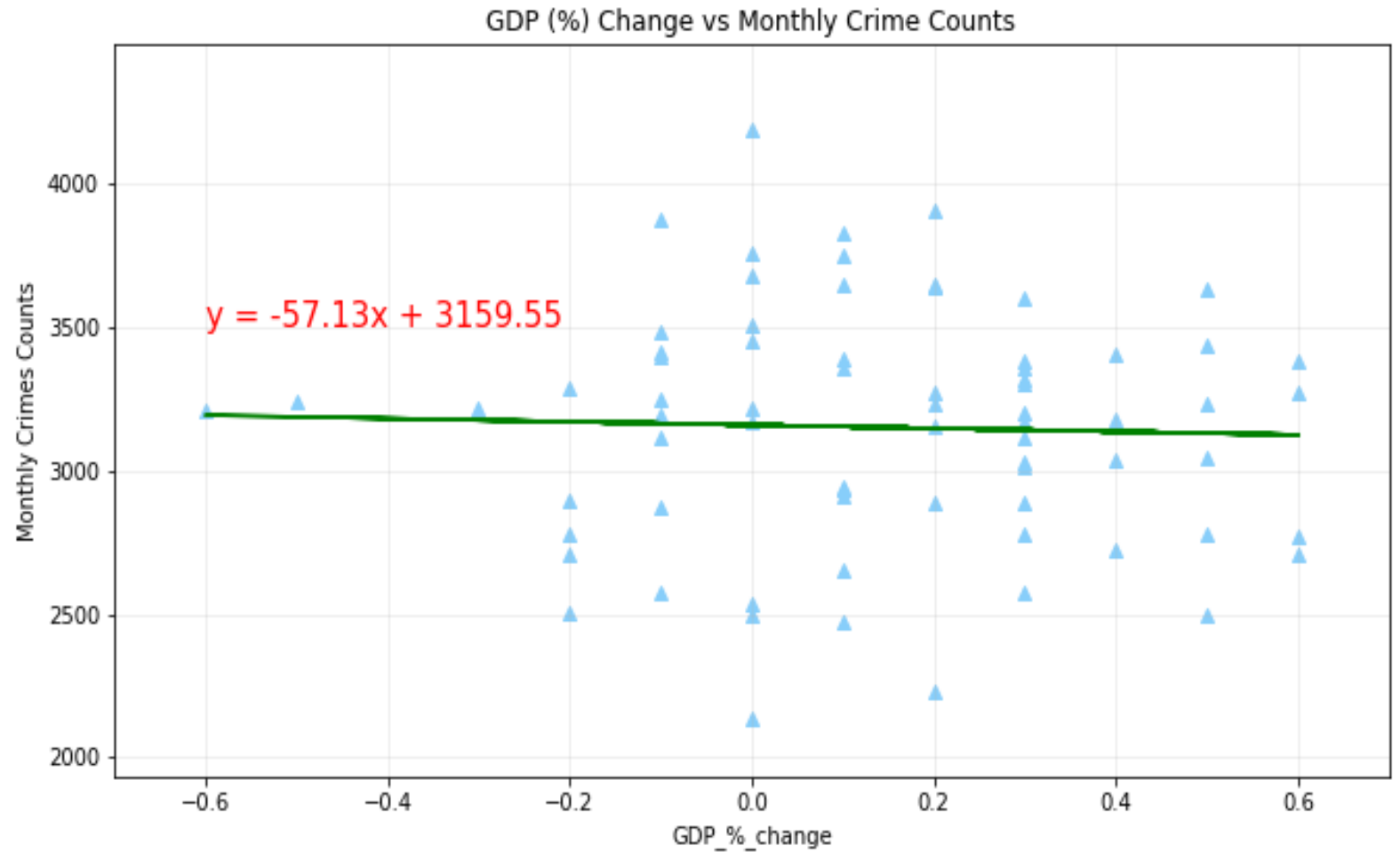
Break &
Enter



Premise Type Investigation

Robbery

Relationship with GDP Growth Rate





FINAL OBSERVATIONS



FUTURE INVESTIGATIONS

Summary



Q&A



Thank you, next!