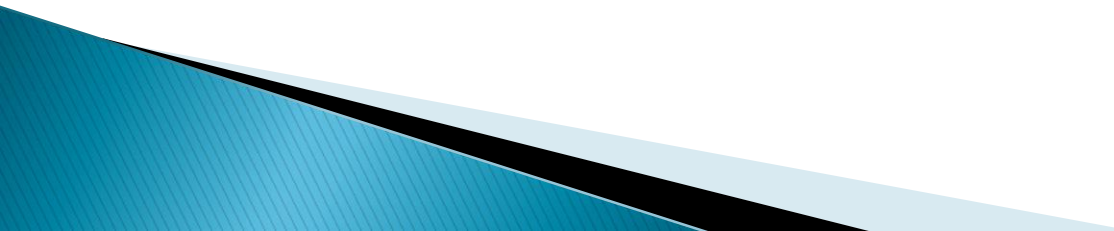**Capstone Project - The Battle of the Neighborhoods**

Applied Data Science by IBM/Coursera

City of Toronto Neighbourhoods comparative study (COVID-19)
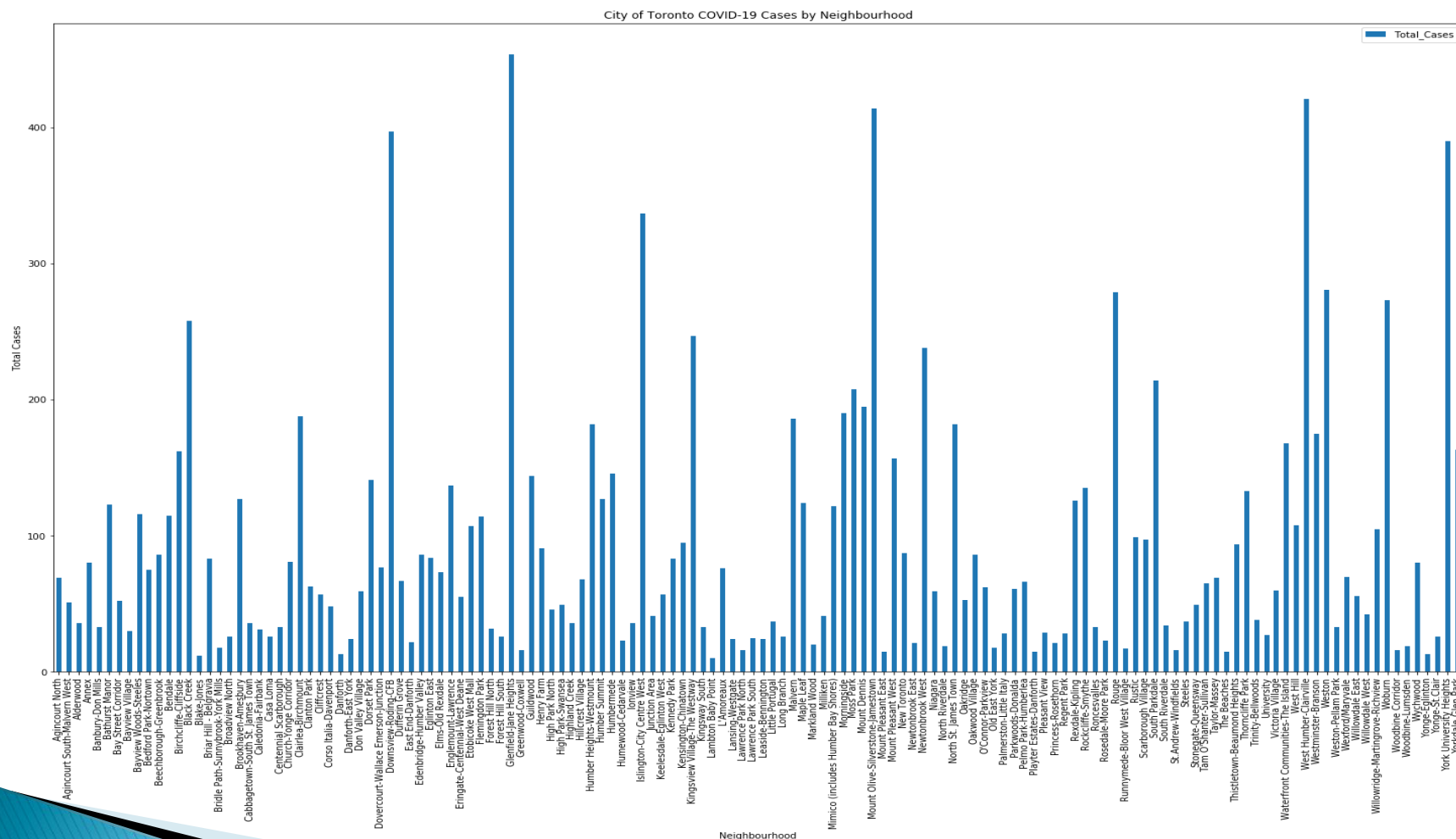
By

Lamis Kusto

June 27, 2020

COVID-19 Cases in the City of Toronto Neighborhoods

- Knowing which areas of the city are hardest-hit is valuable from a public health point of view.

- Characterize Toronto neighbourhoods by features include people testing positive for COVID-19, health units, populations, income, housing and way of transportation.
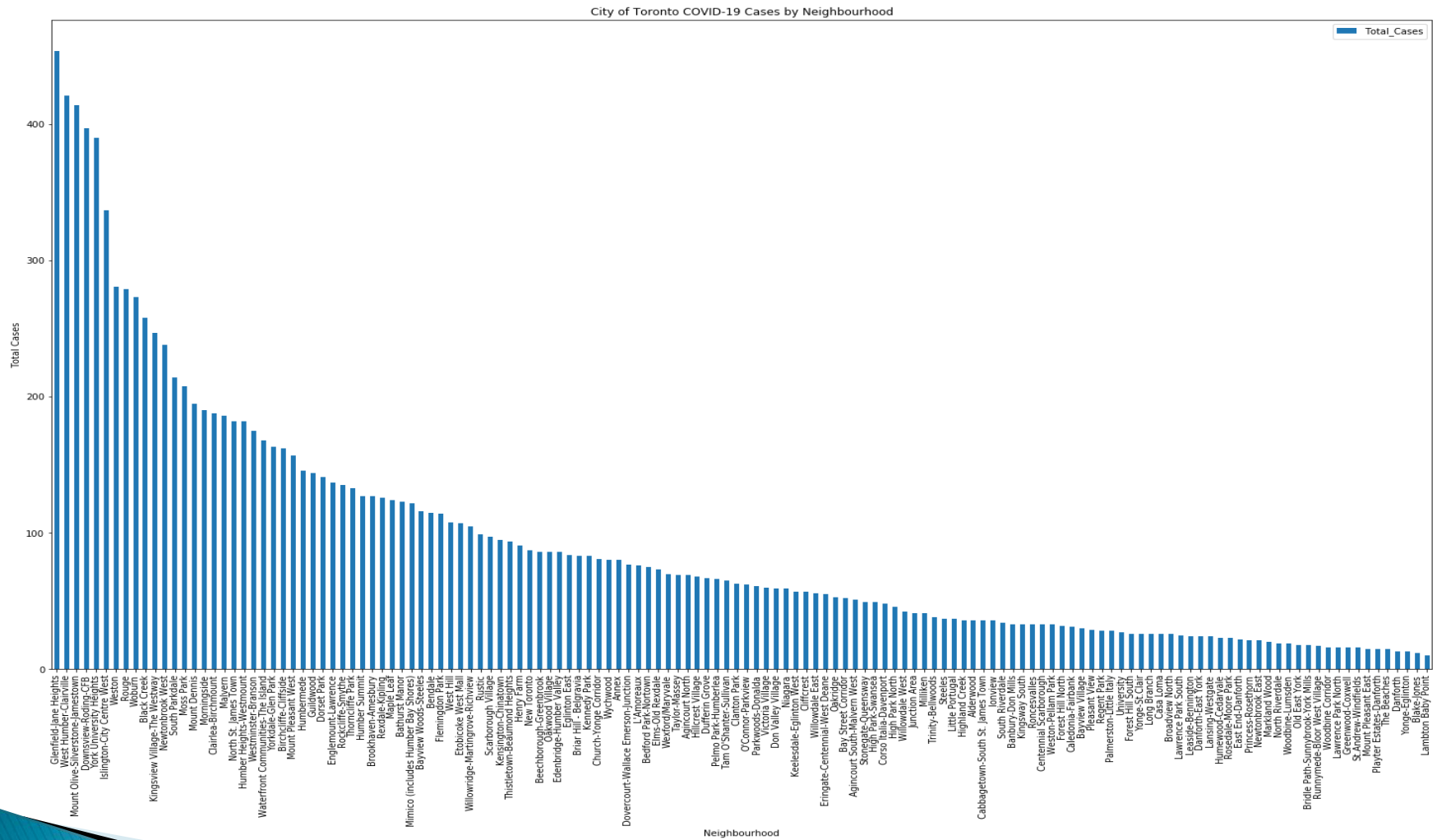
Data Sources

- City of Toronto Neighbourhood Profiles to get the populations, income, education, housing and labour.

    ❖ **Source of Data: Statistics Canada → (CSV file)**

- City of Toronto Neighbourhoods Boundaries for city shape

    ❖ **Source of Data: Toronto Open Data → (GeoJSON file)**

- City of Toronto Cases of COVID-19

    ❖ **Source of Data: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) → (CSV file)**

- Foursquare API to get the Hospital information.
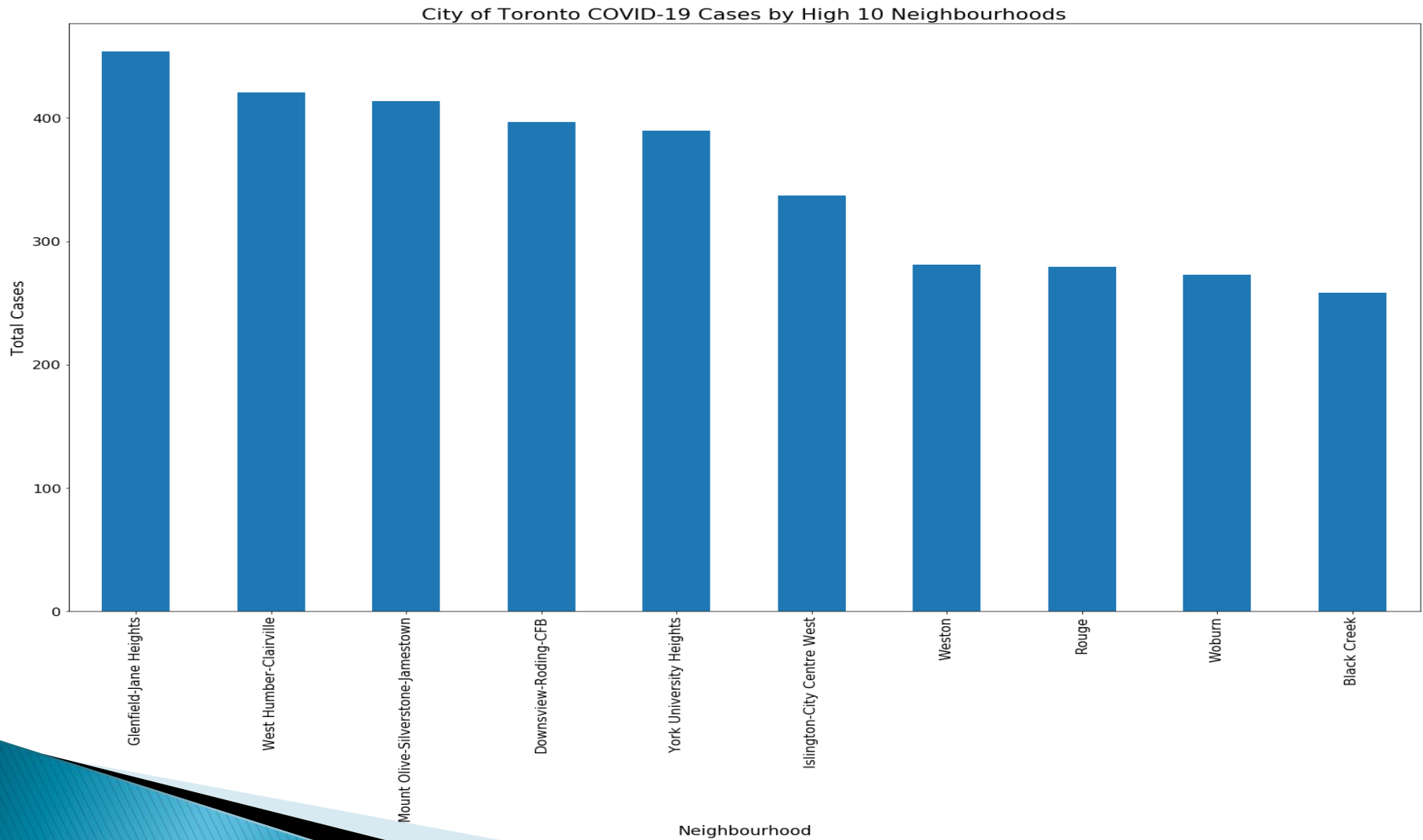
    ❖ **Source of Data: Foursquare**

City of Toronto COVID-19 Cases by Neighbourhood
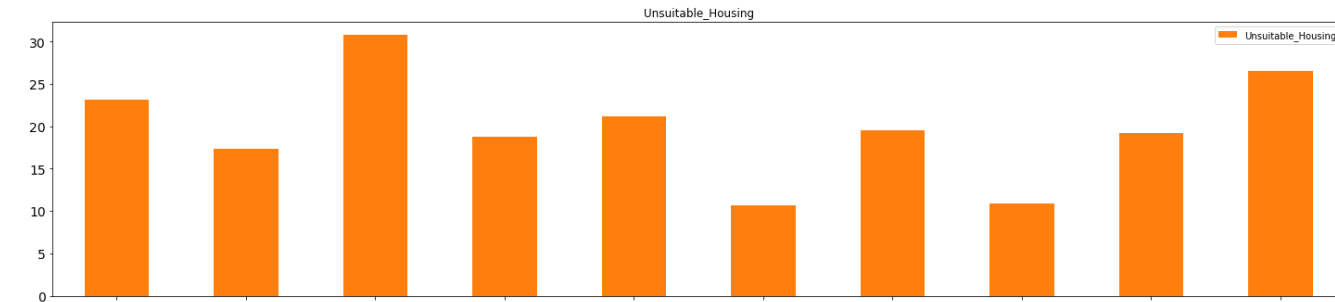

City of Toronto COVID-19 Cases by Neighbourhood

Data ordered from high to low

City of Toronto COVID-19 Cases by Neighbourhood

Highest 10 Neighbourhoods Cases

City of Toronto COVID-19 Cases by High 10 Neighbourhoods
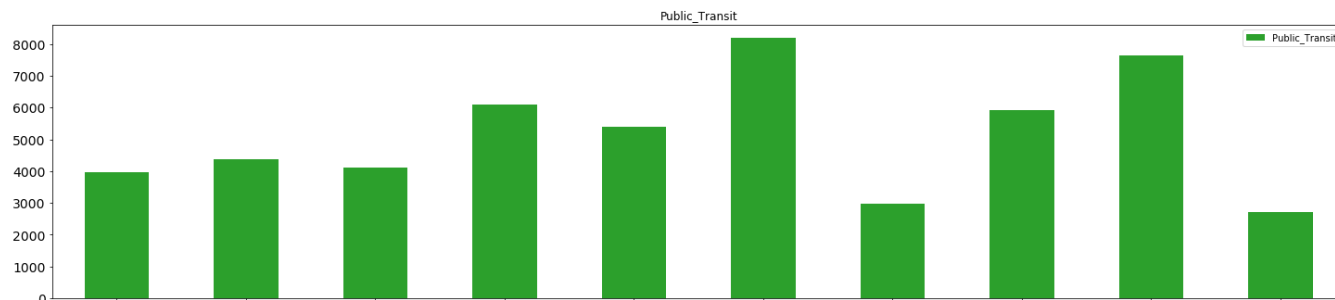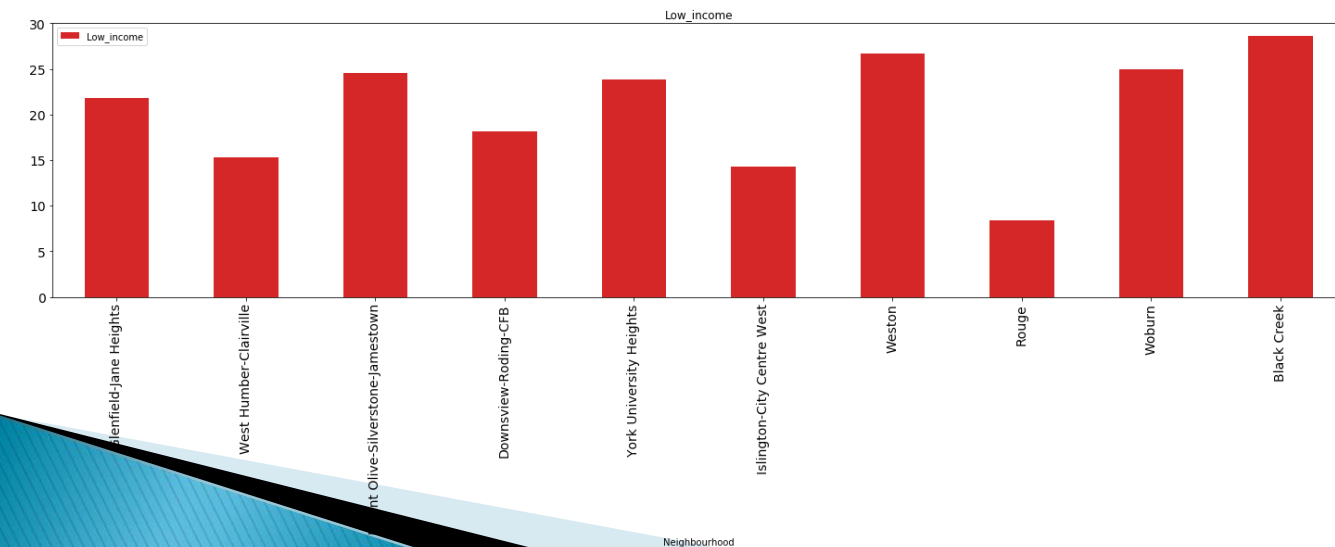
Highest 10 Neighbourhoods by different features
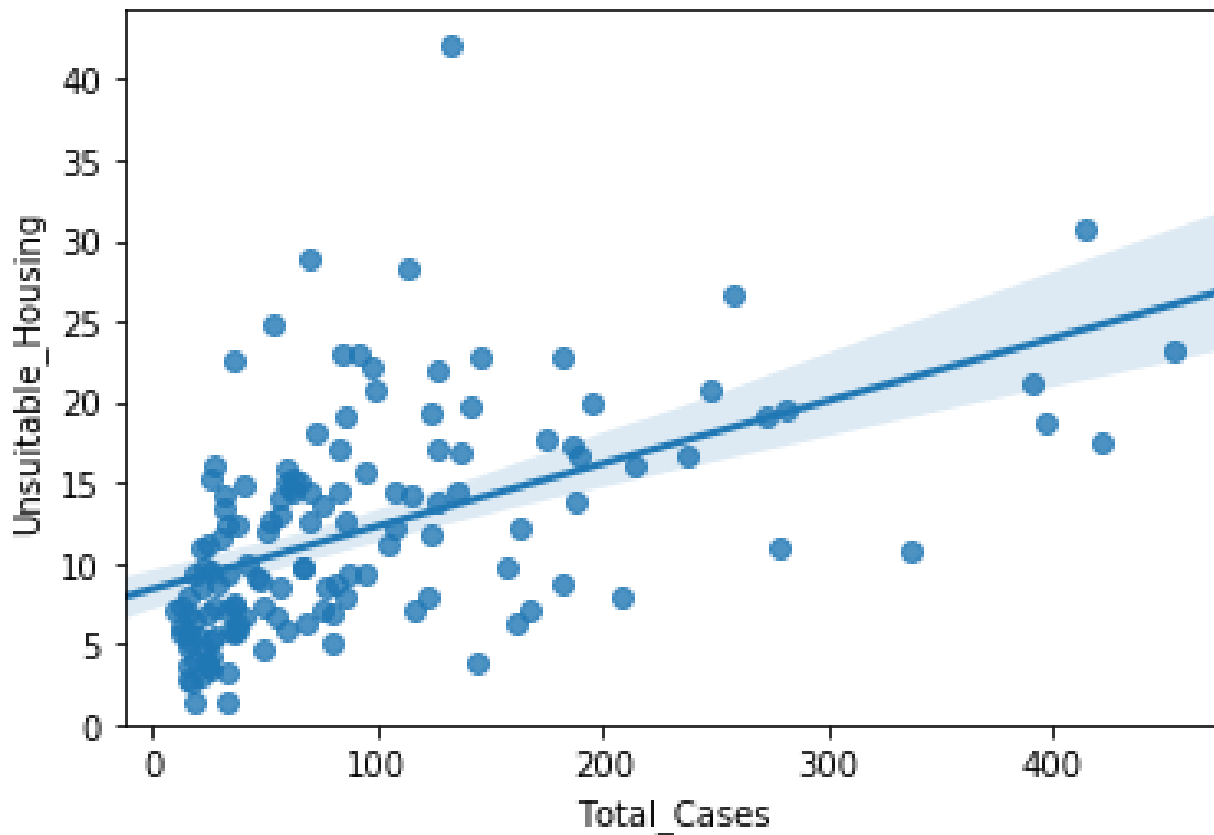

Percentage of Unsuitable Housing

Public Transit

Percentage of Low Income

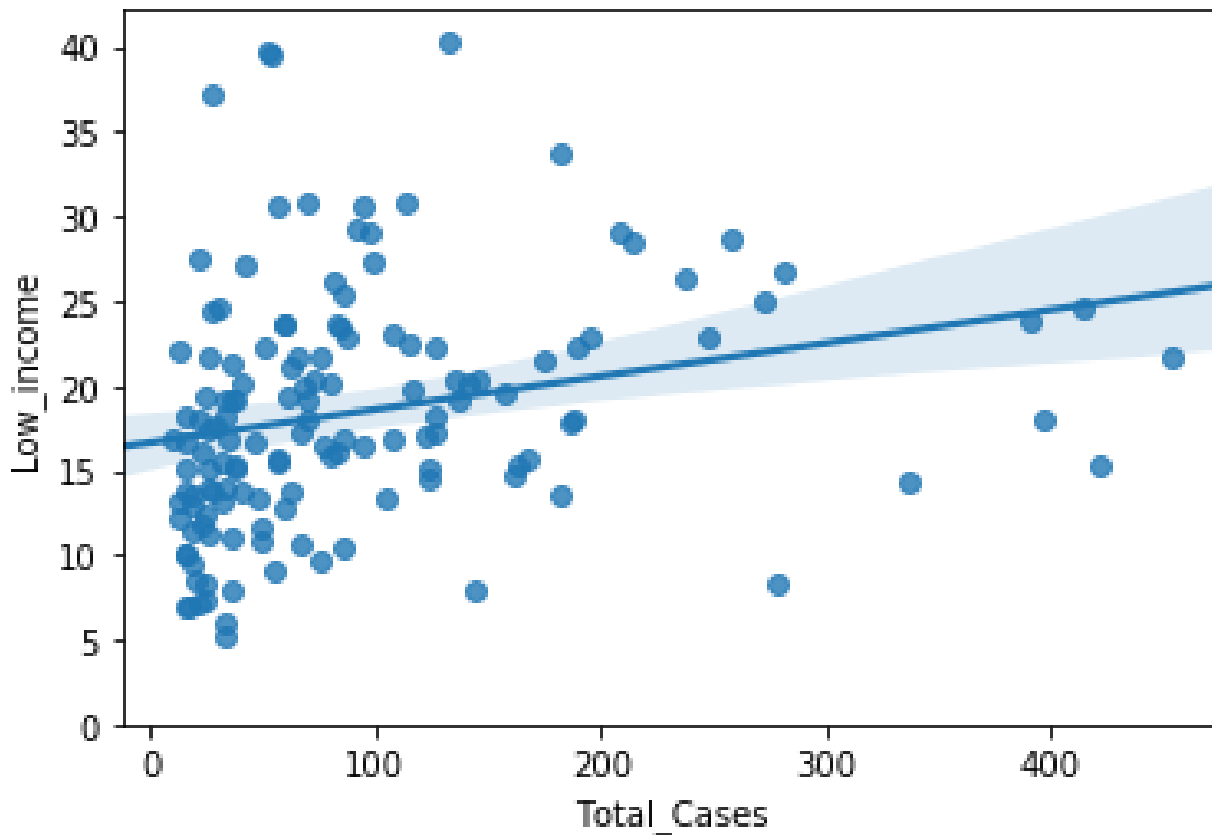# Scatter Plot of Cases of COVID-19 and Percentage of Unsuitable Housing

Correlation Coefficient

0.519884
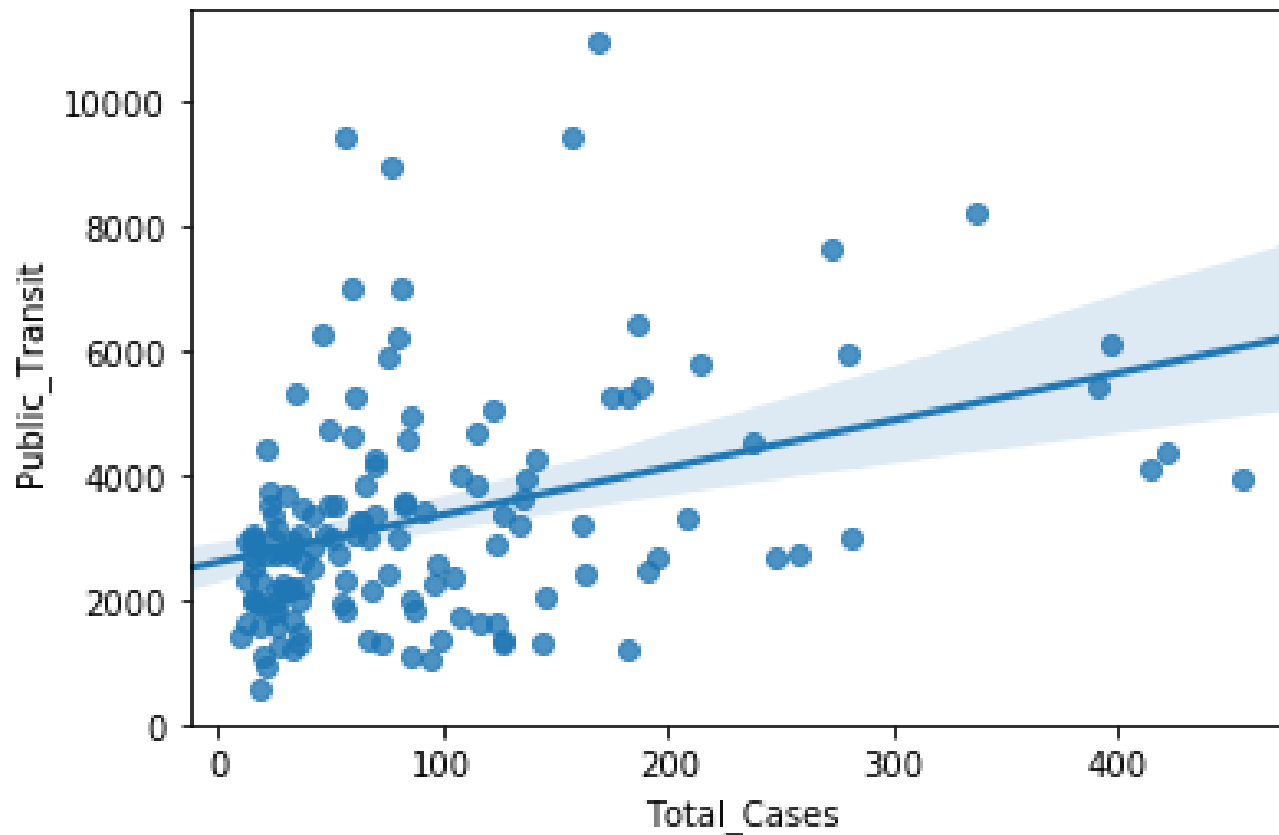
Scatter Plot of Cases of COVID-19 and Public Transit
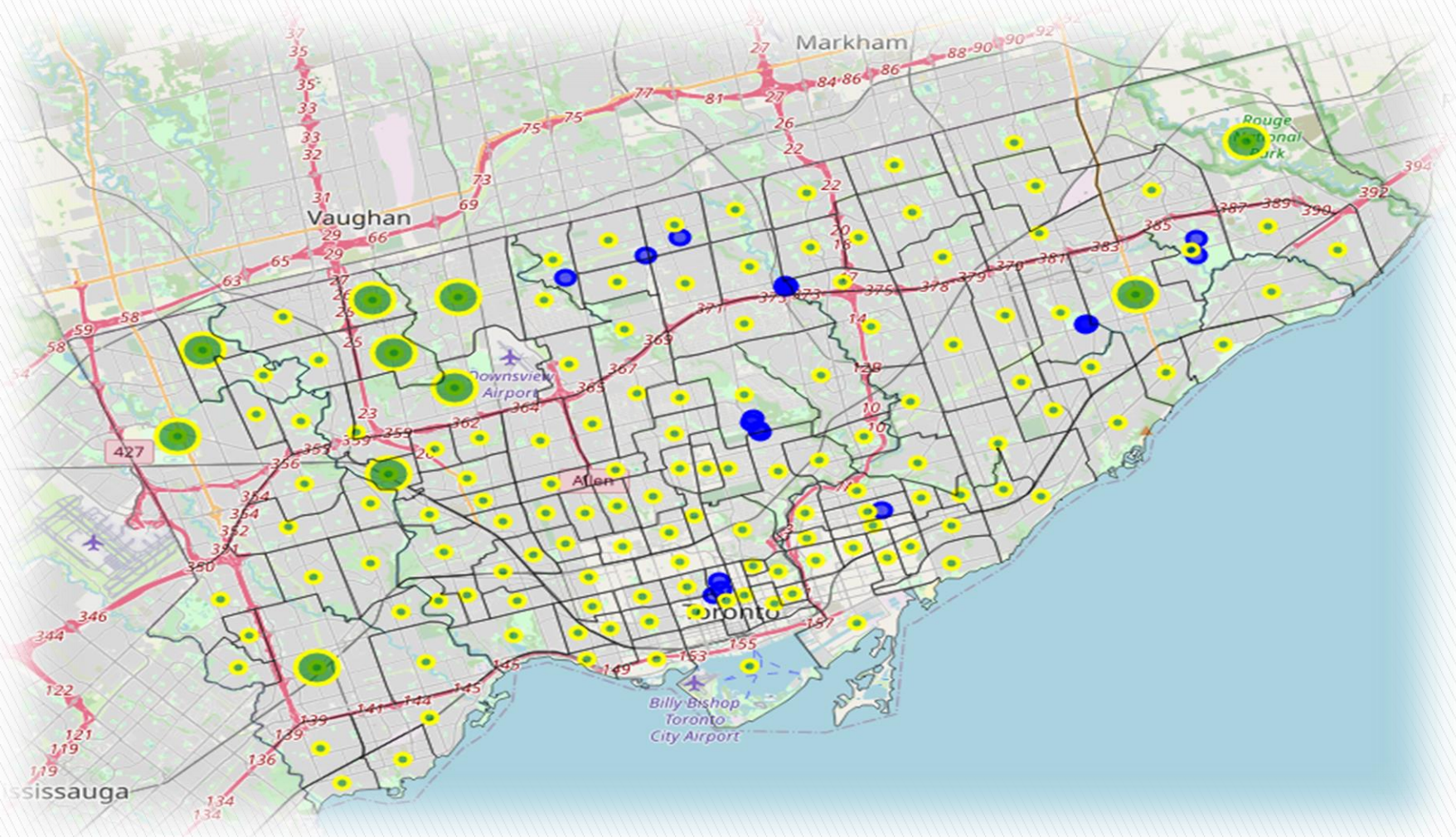

Correlation Coefficient

0.373505

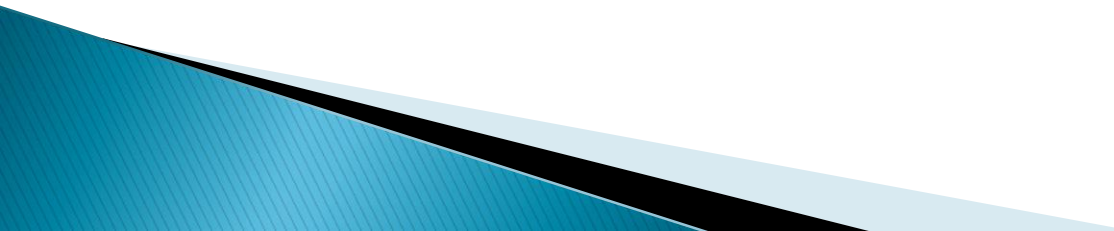# Scatter Plot of Cases of COVID-19 and Percentage of Low Income

Correlation Coefficient

0.253532

City of Toronto Map

- ➤ Blue circles: Hospitals
- ➤ Small Yellow circles: Toronto neighbourhoods.
- ➤ Large Yellow circles: most 10 neighbourhoods hardest-hit by the virus

Result and Conclusion

- Toronto's northeast and northwest are the city's hardest-hit area for COVID-19, according to the result visualized map.

- Knowing which areas of the city are hardest-hit is valuable from a public health point of view.

- Ontarians testing positive for COVID-19 are more likely to live in neighbourhoods characterized by precarious housing and lower income status.

Note:

By all means, the report should not be used as a measuring tool, because in reality the situation is different.

Thank you…