### Toronto Homicide Occurrences\*

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#### Abstract

This report presents an analysis of the City of Toronto's data on homicide occurrences. The results indicate that education, income, and living environment has an affect on homicide occurrences. In order to perform an analysis of the relationship between Toronto's homicide occurrences and such external factors, the statistical programming language R is used. The results contribute to our understanding of the issue, enabling to identify patterns to Toronto's homicide occurrences.

### 1 Introduction

Only heavy crimes such as first degree murder, second degree murder, infanticide or manslaughter are considered homicide. The definition of homicide is usually consistent across nations. Hence, compared to any other crimes, homicide has more international consensus on the meaning and nature of homicide. Therefore, it is important to examine homicide since it is considered as a "comparable and reliable barometer of violence in society".

As severe as it is, homicide is relatively rare in Canada compared to other countries, but in recent years, Canada's homicide rate has been higher. However, due to COVID-19, there has been stay-at-home measures and encouraged "physical distancing". This caused people to spend more time at home and caused businesses to close temporarily or adapt to different methods of services. These changes in society and economy has led to a shift in crime patterns across Canada. This report will help identify such shifts in crime patterns in Toronto and the different motivational factors that could lead to homicide.

<sup>\*</sup>Code and data are available at: https://github.com/19akim/Final\_paper.git

- 2 Data
- 3 Model
- 4 Results
- 5 Discussion
- 5.1 First discussion point
- 5.2 Second discussion point
- 5.3 Third discussion point
- ${\bf 5.4}\quad {\bf Weaknesses} \ {\bf and} \ {\bf next} \ {\bf steps}$

# Appendix

## A Additional details

## B References