Crime Rates in Toronto*

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Abstract

Neighbourhood crime rates in the city of Toronto is essential data to understand illegal activity in the city. We cleaned and analyzed crime statistics in 2020 based on different crimes using graphs.. Third sentence (our findings). Fourth sentence (why it matters).

1 Introduction

First paragraph is going to be motivational and broad.

Second paragraph about what was done and what was found

Third paragraph about implications

Remainder of this paper is: Section 1.0.1 explains the data. Section **??** covers results...

1.0.1 Data

Paragraph or two introducing data set broadly.

We obtained our data set using the 'opendatatoronto' package from the City of Toronto's Open Data Portal (Gelfand 2020) and the statistical programming language R (R Core Team 2020)

Our data is about ...

1.1 Data Source

From Open Data Toronto https://open.toronto.ca/dataset/neighbourhood-crime-rates/

1.2 Data Cleaning

Used the 'janitor' package to check data to clean the data set by checking for dupes and cleaning names

1.3 Data Extract

Show an extract of the data (Table 1)

Paragraph or two more about Table (Table 1) Used package 'knitr'

*Code and data are available at: https://github.com/meha-g/Paper1.

Table 1: First ten rows of a dataset of number of homicides between the years of 2014 to 2020.

Neighbourhood	Population	Homicide 2014	Homicide 2015	Homicide 2016	Homicide 2017	Homi
Yonge-St.Clair	14083	0	0	0	0	
York University Heights	30277	1	0	2	0	
Lansing-Westgate	18146	0	0	0	0	
Yorkdale-Glen Park	17560	1	1	1	1	
Stonegate-Queensway	27410	0	0	0	0	
Tam O'Shanter-Sullivan	29970	0	1	0	0	
The Beaches	23364	0	0	0	0	
Thistletown-Beaumond Heights	10948	0	0	0	0	
Thorncliffe Park	23518	3	2	1	4	
Danforth East York	18427	0	0	0	0	

1.4 Summary Statistics

Neighborhoods with most crime

```
library(skimr)
pop_mean <- mean(crime_dat$F2020_Population_Projection)
```

```
## Warning in mean.default(crime_dat$F2020_Population_Projection): argument is not
## numeric or logical: returning NA
```

```
crime_dat %>%
  select(ends_with("rate2020")) %>%
  summary()
```

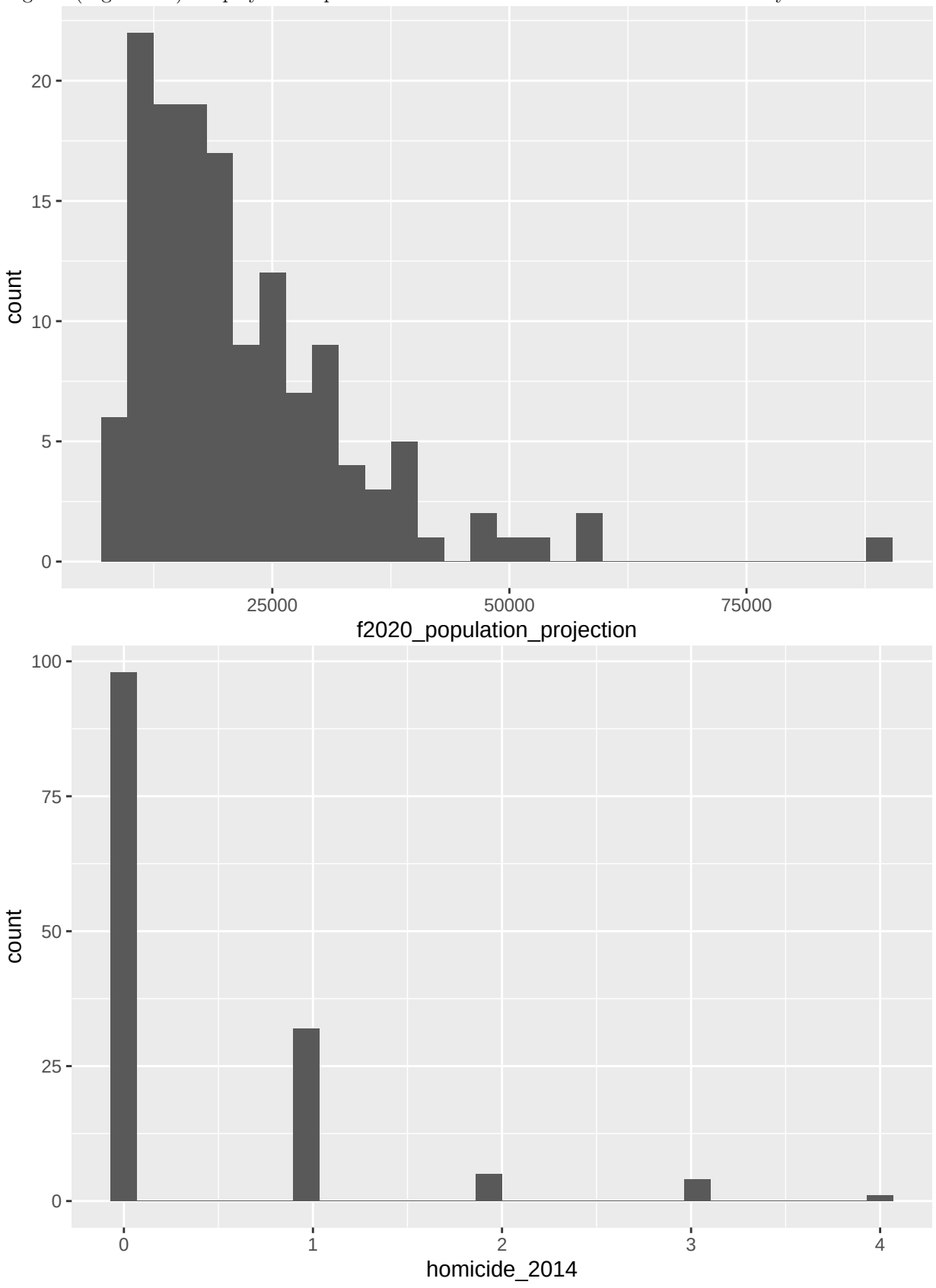
```
##  assault_rate2020 auto_theft_rate2020 break_and_enter_rate2020
##  Min.   : 116.2   Min.   :  41.65     Min.   : 28.09
##  1st Qu.: 320.4   1st Qu.: 102.94     1st Qu.:122.14
##  Median : 484.4   Median : 151.58     Median :191.50
##  Mean   : 563.3   Mean   : 183.20     Mean   :227.14
##  3rd Qu.: 664.9   3rd Qu.: 226.58     3rd Qu.:285.58
##  Max.   :3162.5   Max.   :1066.44     Max.   :840.83
##  robbery_rate2020  theft_over_rate2020 homicide_rate2020 shootings_rate2020
##  Min.   :  7.133   Min.   :  0.00      Min.   : 0.000    Min.   :  0.000
##  1st Qu.: 50.666   1st Qu.: 20.40      1st Qu.: 0.000    1st Qu.:  0.000
##  Median : 76.242   Median : 31.83      Median : 0.000    Median :  7.678
##  Mean   : 87.842   Mean   : 38.65      Mean   : 2.041    Mean   : 14.427
##  3rd Qu.:112.382   3rd Qu.: 48.71      3rd Qu.: 3.414    3rd Qu.: 21.048
##  Max.   :543.819   Max.   :163.47      Max.   :14.972    Max.   :102.934
```

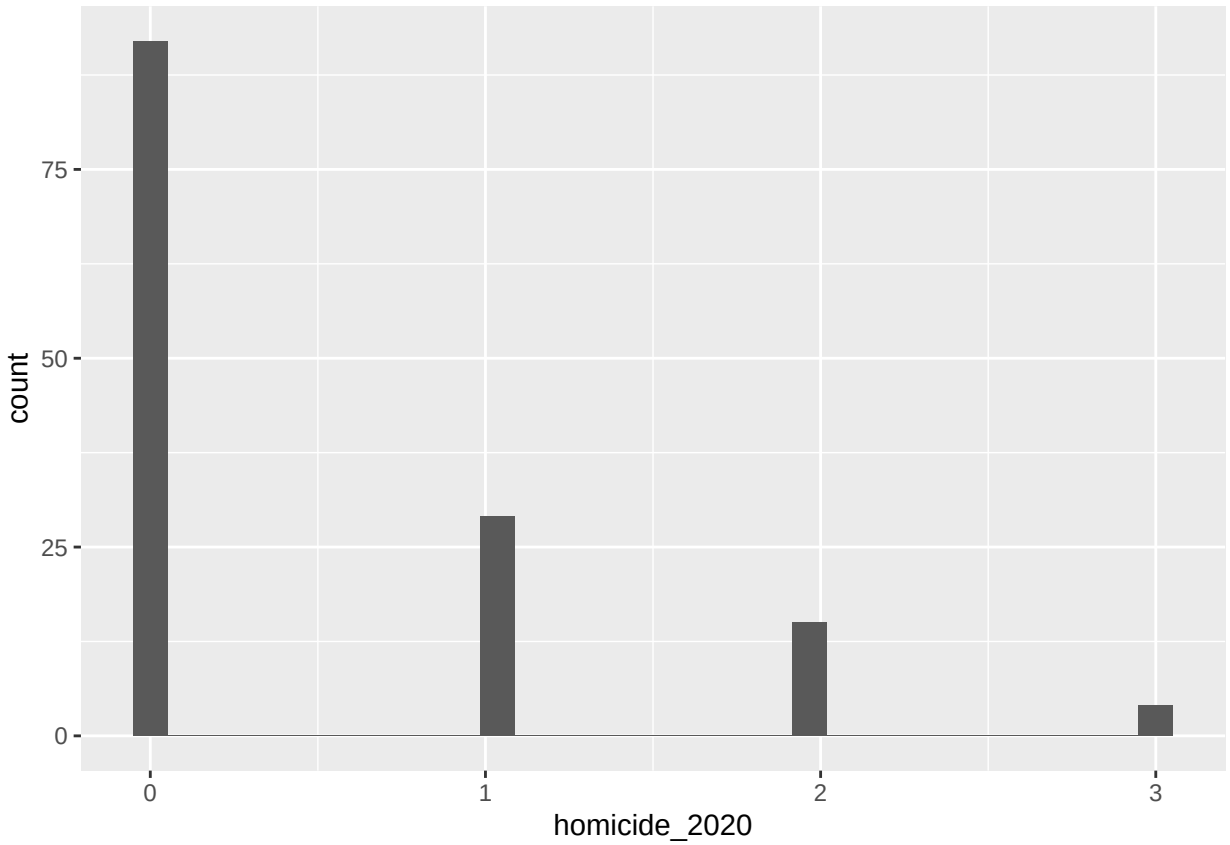
1.5 Graphs

Our data set is of crime rates (Figure **??**)

We are interested in the number of homicides from the years 2014 to 2020 since this showcases the current trends of dangerous crimes being committed and its implications for the safety of neighborhoods in Toronto.

Figure (Figure **??**) displays the pattern of homicides in Toronto between the years of 2014-2020





Talk way more about it.

1.6 Weaknesses and next steps

Weaknesses and next steps should also be included.

Appendix

A Additional details

References

Gelfand, Sharla. 2020. *Opendatatoronto: Access the City of Toronto Open Data Portal.* https://CRAN.R-project.org/package=opendatatoronto.

R Core Team. 2020. *R: A Language and Environment for Statistical Computing.* Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.