

My title*
My subtitle if needed

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Abstract

First sentence. Second sentence. Third sentence. Fourth sentence.

Table of contents

1	Introduction	1
2	2. Data	1
3	2.1 Introduction to the Data	2

1 Introduction

Toronto is infamous for its heavy traffic, having one of the busiest highways in North America. With high amounts of traffic, also comes a lot of accidents. This paper was written with the purpose of compiling information of hotspot automobile accidents in the Toronto Region, to locate high traffic and high accident areas. Furthermore, this information assists in identifying the reasons for these accidents, whether it be distracted driving, or infrastructure related.

- which neighbour hoods and intersections in toronto experience the most car accidents?

2 2. Data

The data is sourced from the City of Toronto Open Data, a portal containing Licensed official data of Toronto. Used R to compile this paper as well as packages....

*Code and data are available at: [LINK](#).

3 2.1 Introduction to the Data

This Data consists of 18,763 observations of automobile accidents in the Region of Toronto from 2006 to September 2024. It consists of 6 variables of interest, including `Date`, `Time`, `Street 1`, `Street 2`, where the intersection (or nearest intersection) was to the accident, `Injury` identifying if injuries occurred and their severity, `geometry` containing the latitude and longitude of the accident. This data was cleaned to have the term ‘automobile’ accidents include any accidents involving cars, trucks, motorcycles, transit vehicles or emergency vehicles. Accidents where pedestrians or cyclists are involved are also included.

- each point of accident is counted on the map, if multiple accidents happen, bubble is bigger

In Figure 1, the map shows clusters of accidents across the city of Toronto. Darker circles show a denser area of accidents, and lighter circles show less dense areas of accidents. Most accidents happen along major roads, intersections, and densely populated areas. Many accidents occur Downtown Toronto, located at the bottom center of the map, as well as on the far right of the map near the intersections of the highways 427, 401 adn 409, on the right side of the map surrounding Scarborough, and finally along Steeles Ave, which is the uppermost highlighted street on the map.

In `?@fig-accident_top10`, the top 10 neighborhoods with the most accidents have been displayed to compare the number as well as the severity of the accidents. These numbers correlate to the following neighbourhoods:

put an image of toronto with major highways, roads nad divided by hood

1- West Humber- Clairville, Etobicoke 119- Wexford/Maryvale Scarborough 20- Alderwood, Etobicoke, Alderwood 30- Brookhaven- Amesbury, North York 166- 70- South Riverdale, Old City of Toronto 170- Yonge- Bay Corridor, Old City of Toronto, Bay Street, Financial District 73- Moss Park- Old City of Toronto, Moss Park, Corktown and Garden District 78- Kensington- Chinatown, Old City of Toronto, Alexandra Park, Chinatown, Grange Park, Kensington Market 85- South Parkdale- Old City of Toronto, Parkdale, South Parkdale

Noticeably, neighbourhood 1 has the most accidents occurred, by almost 200 accidents. Proportionally, neighbourhood 1 also experiences higher severity accidents.

i © Stadia Maps © Stamen Design © OpenMapTiles © OpenStreetMap contributors.

i 42 tiles needed, this may take a while (try a smaller zoom?)

Warning: Removed 481 rows containing missing values or values outside the scale range (`geom_point()`).

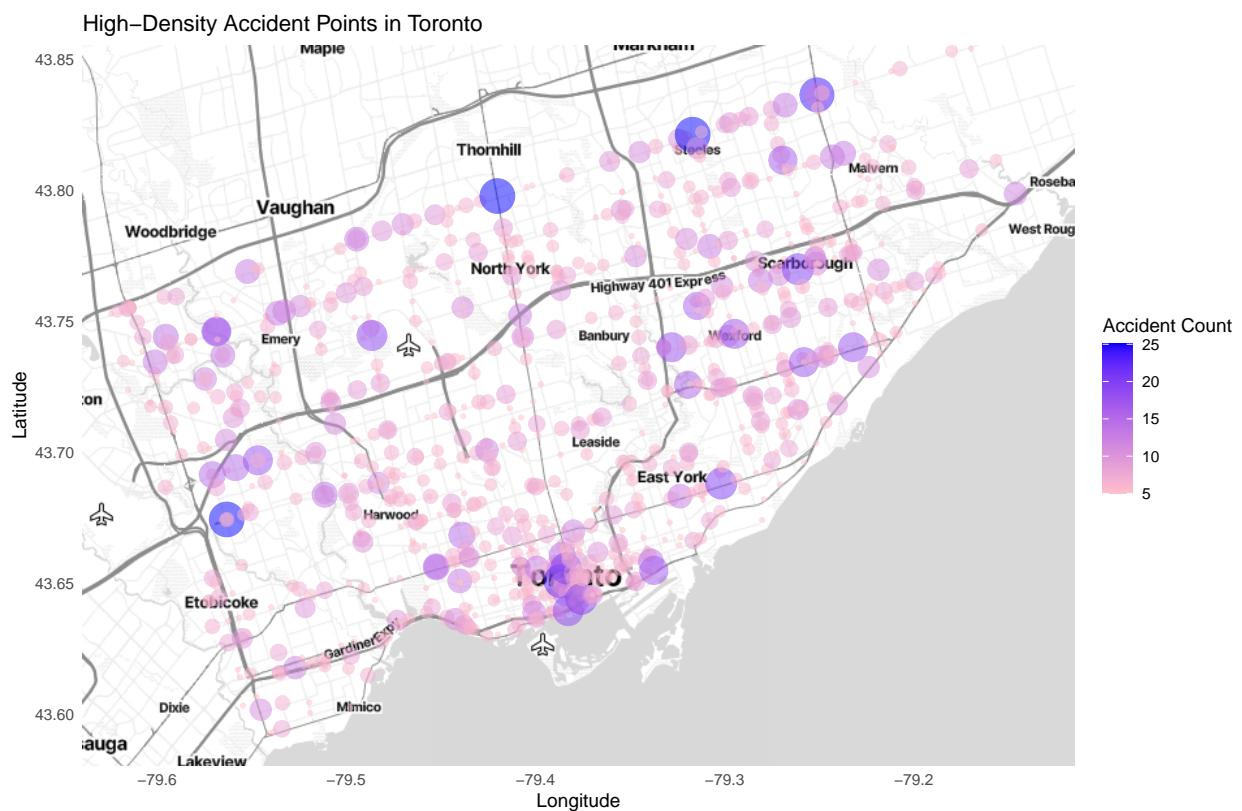


Figure 1: somethinf

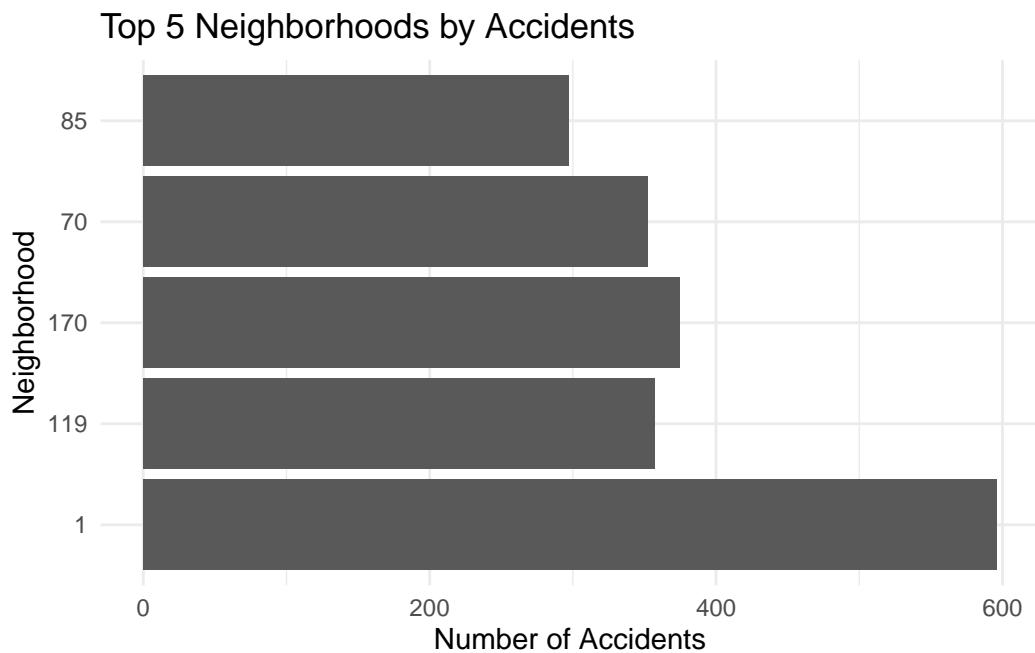


Figure 2: somethinf

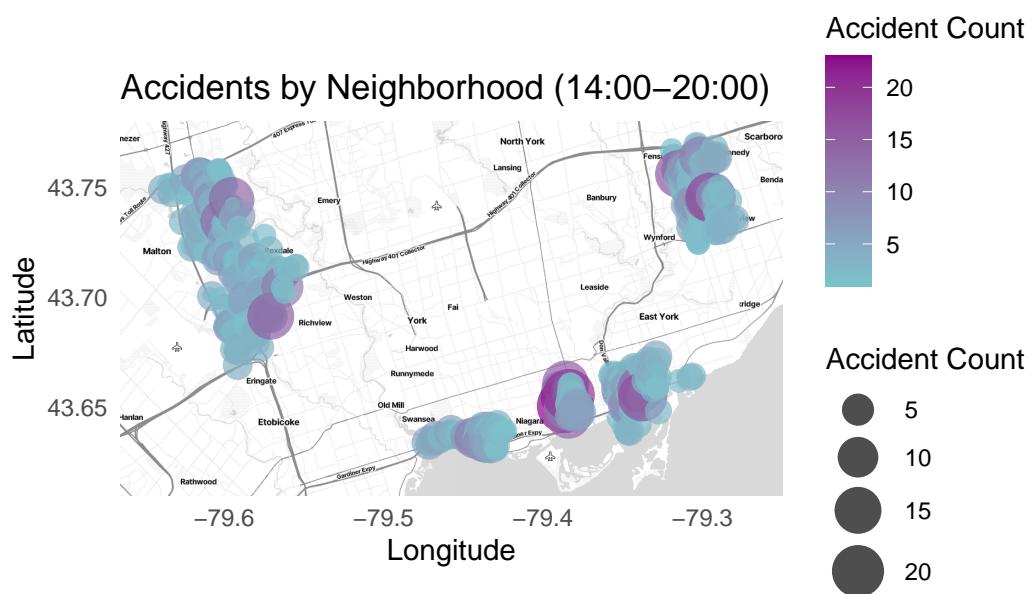


Figure 3: somethinf

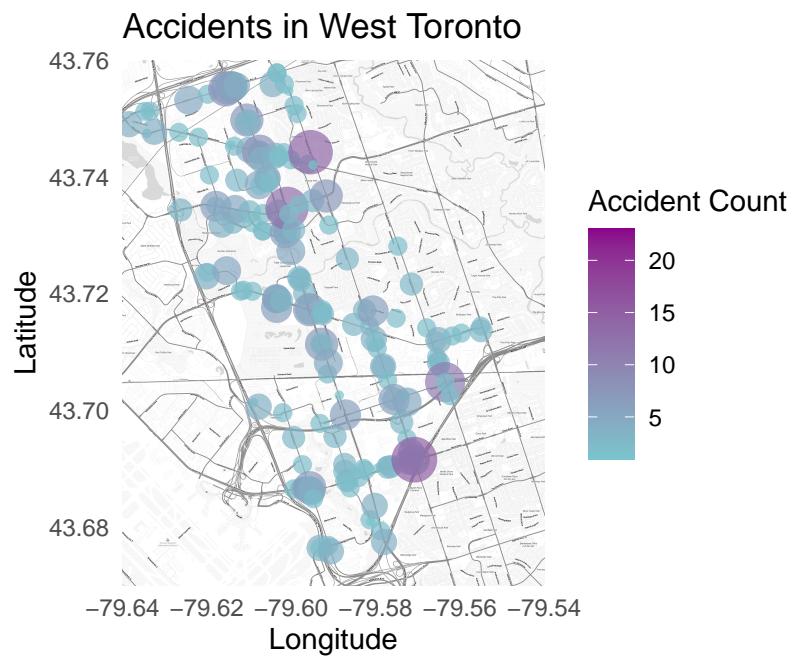


Figure 4: NEIGHBOURHOOD 1

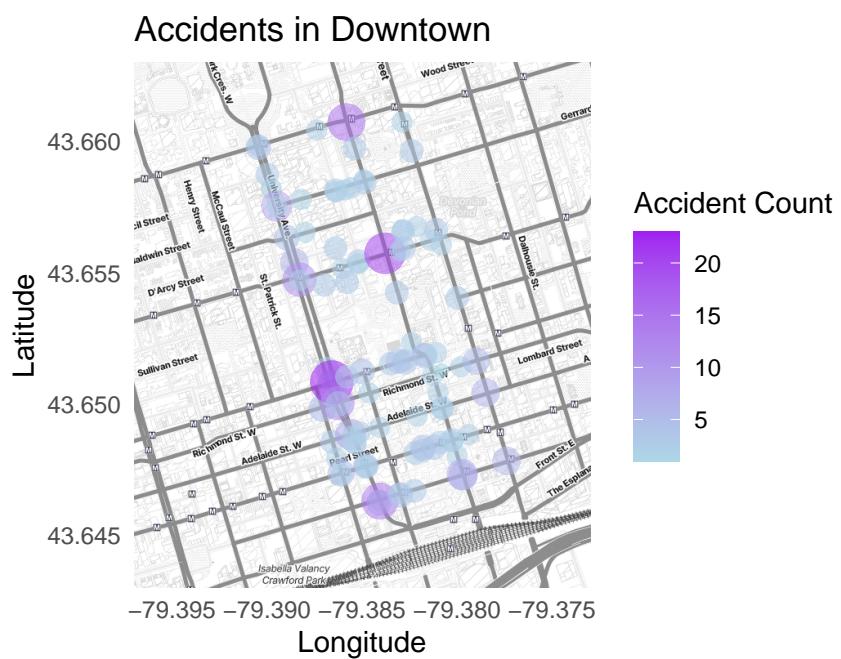


Figure 5: NEIGHBOURHOOD 170

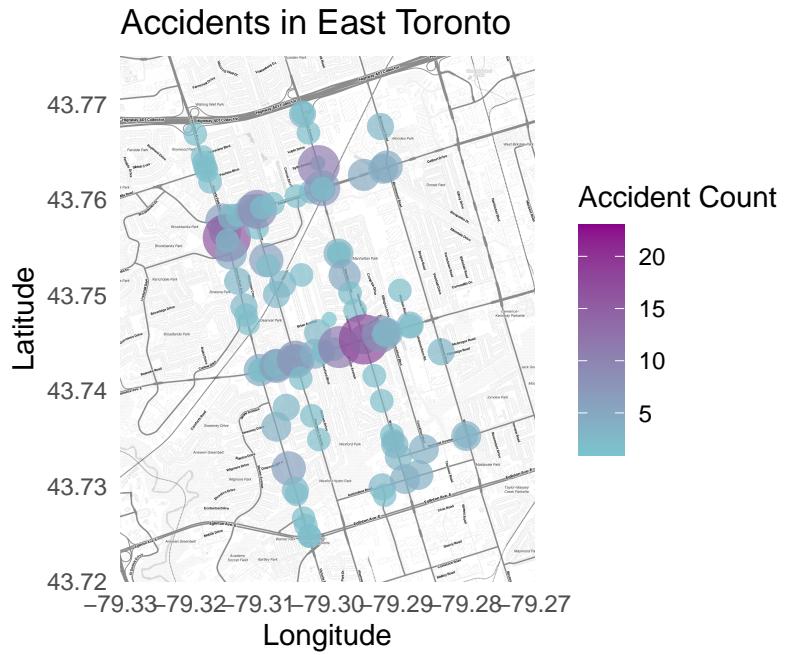


Figure 6: NEIGHBOURHOOD 119

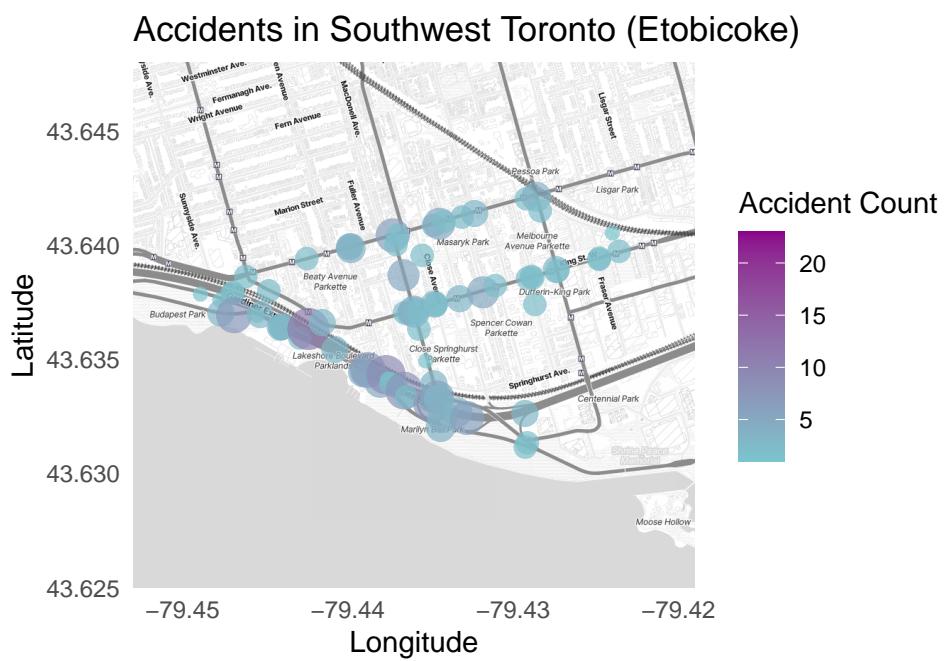


Figure 7: NEIGHBOURHOOD 119

Accidents in Southeast Toronto (Scarborough)

