final draft

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Investigation of cyclist and pedestrain collisions in Toronto over the years. Meaning to answer the question of if Toronto is a safe city for cyclists and pedestrians, and if the citizens themselves agree based on statisics. Results?

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1. Introduction

Toronto is one of the many cities that has been advocating for citizens to find more environmentally friendly transportation to work. One of the many things the city has been promoting is biking, walking or taking public transport. By implementing bike lanes onto streets and providing rentable city bikes that you may pick up and drop off at a number of locations, the city hopes to encourage citizens to use these options. Many locals also enjoy bike rides in warm weather or to local events and shops. However, the streets of downtown Toronto have been many times been deemed unsafe due to traffic, construction and lack of bike lanes for cyclists and pedestrains.

Toronto is the most perilous city in the world to be a cyclist.

There are trends of cyclist and pedestrian collisions happening around the city, increasing by year.

For citizens to take advantage of newly built bike lanes and close-distance shopping, they must feel safe on the city streets.

From here, I will investigate any patterns or correlations between the severity of cyclist collisions over the years. This can give us an idea of whether Toronto streets are safe for cyclcists, whether bike lanes are creating a safer environment for cyclists, and the city of Toronto has implemented any safety concerns to make it safer for cyclists in the city.

2. Data

2.1 Introducing and cleaning the data

The data used for this paper has been retrieved from the City of Toronto Open Data Portal, titled Motor Vehicle Collisions involving Killed or Seriously Injured Persons. It includes driving collisions recorded from 2006 to 2022, listing many variables about the collisions such as location, people invovled, weather conditions, driver actions, speed and so on.

2.2 Variables of interest

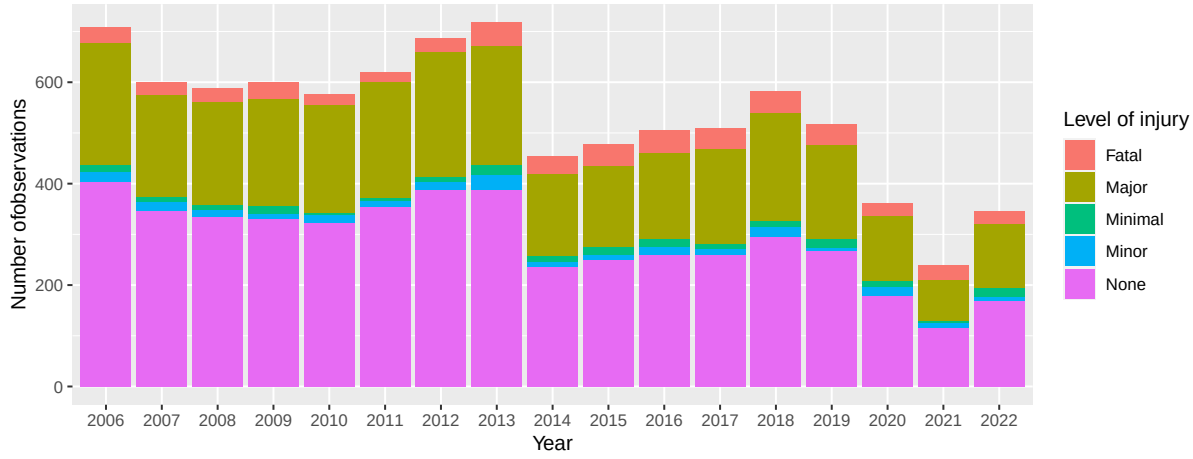
Since I am comparing pedestrian and cyclist collisions, I have filtered the data to show only pedestrian and cyclist collisions, and have selected the variables 'Date' and 'Injury' to study. 'Date' is formatted as YYYY-MM-DD and 'Injury' lists the severity of the injury from 'None', 'Minimal', 'Minor', 'Major' and 'Fatal'. I then created two new columns titled 'Year' and 'Month', to seperate the year and month information to allow for easier comparison of years and months.

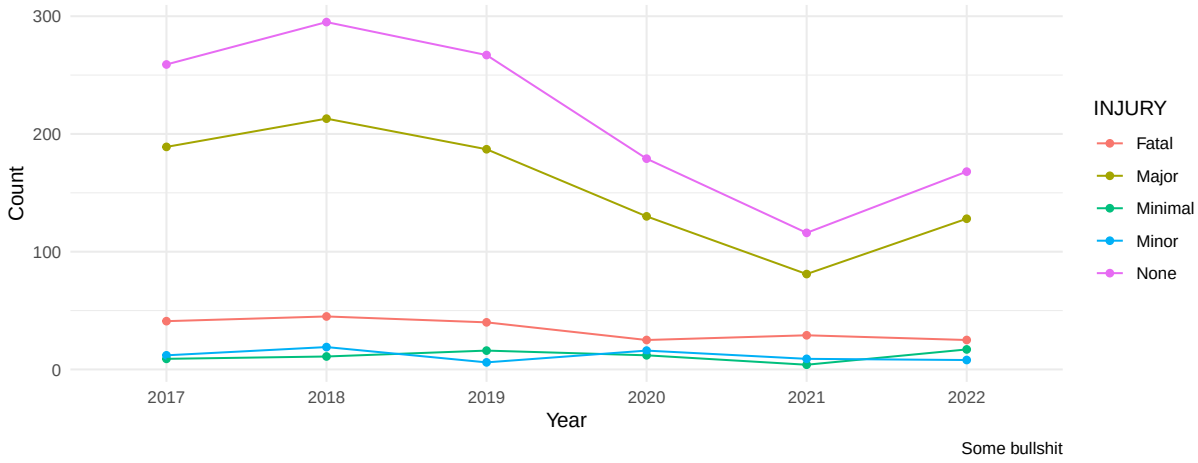
I then grouped the data by 4 year intervals to have an overview of the data. Looking at this overview, it is abundantly clear that the number of collisions decreased around 2014 and 2021, and over all decreased from 2006 to 2022. What could be the possibility for that?

2.3 some observations

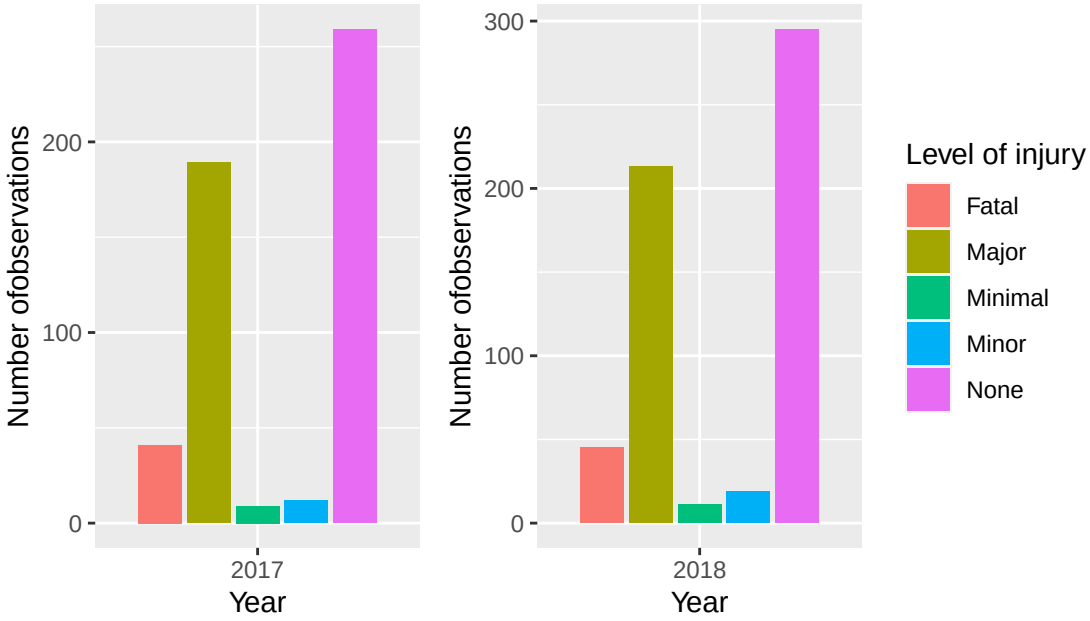
https://www.toronto.ca/services-payments/streets-parking-transportation/road-safety/vision-zero/vision-zero-dashboard/ Vision Zero is an action plan implemented by the city of Toronto focused on reducing the amount of traffic and driving related fatalities. This plan was launched in 2016. Here we can observe the data of fatalities from 2016 until 2022.

- change graph to maybe line graphs? https://www.cbc.ca/news/canada/toronto/pedestrian-deaths-prompt-concern-1.4560548


Number ofobservations
600
400
200
0
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Year
Level of injury
Fatal
Major
Minimal
Minor
None


Count
300
200
100
0
2017
2018
2019
2020
2021
2022
Year
INJURY
Fatal
Major
Minimal
Minor
None
Some bullshit

There has been reported an increase in and pedestrian deaths from 2017 to 2018. Here we can compare the the two years, and notice a jump in injuries.



3. Results

4. References