final draft

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Invalid Date

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-abstract-

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, by implementing bike lanes onto streets and providing rentable city bikes that you may pick up and drop off at a number of locations. 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.

```
#creating MONTH and SEASON column
cyclists_collisions$DATE <- as.Date(cyclists_collisions$DATE)
cyclists_collisions <- cyclists_collisions %>% arrange(DATE)

col_seasons <- cyclists_collisions %>% mutate(MONTH = month(DATE), SEASON = case_when(mont

years <- cyclists_collisions %>% group_by(YEAR = format(DATE, "%Y"))
years
```

```
# A tibble: 1,795 x 7
# Groups:   YEAR [17]
   DATE       IMPACTYPE          INVTYPE       INJURY ACCLASS      CYCLIST YEAR
   <date>     <chr>              <chr>         <chr>  <chr>        <chr>   <chr>
 1 2006-02-11 Cyclist Collisions Driver        None   Non-Fatal I~ Yes     2006
 2 2006-02-11 Cyclist Collisions Cyclist       Major  Non-Fatal I~ Yes     2006
 3 2006-02-27 Cyclist Collisions Vehicle Owner None   Non-Fatal I~ Yes     2006
 4 2006-02-27 Cyclist Collisions Driver        None   Non-Fatal I~ Yes     2006
 5 2006-02-27 Cyclist Collisions Cyclist       Major  Non-Fatal I~ Yes     2006
```

```
 6 2006-03-01 Cyclist Collisions Driver        None   Non-Fatal I~ Yes     2006
 7 2006-03-01 Cyclist Collisions Cyclist       Major  Non-Fatal I~ Yes     2006
 8 2006-04-06 Cyclist Collisions Driver        None   Non-Fatal I~ Yes     2006
 9 2006-04-06 Cyclist Collisions Cyclist       Major  Non-Fatal I~ Yes     2006
10 2006-04-20 Cyclist Collisions Vehicle Owner None   Fatal        Yes     2006
# i 1,785 more rows
```

```
years %>% filter(YEAR == 2017, INJURY == 'Fatal') %>% summarise(n=n())
```

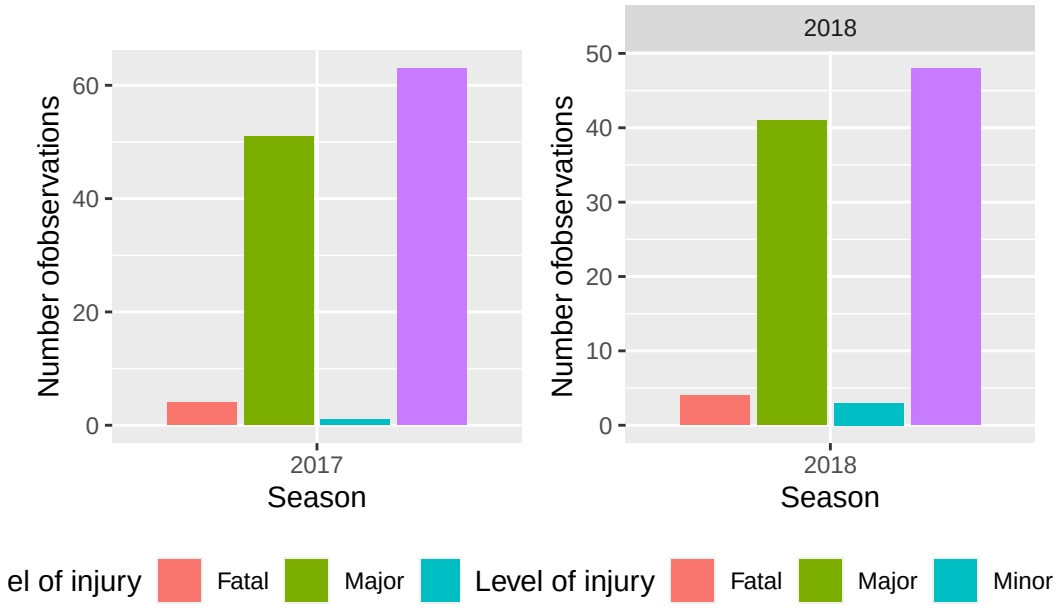
```
# A tibble: 1 x 2
  YEAR      n
  <chr> <int>
1 2017      4
```

```
years %>% filter(YEAR == 2018, INJURY == 'Fatal') %>% summarise(n=n())
```

```
# A tibble: 1 x 2
  YEAR      n
  <chr> <int>
1 2018      4
```

```
year_2017 <- years %>% filter(YEAR == 2017) %>% ggplot(mapping = aes(x = YEAR, fill = INJU
  labs(x = "Season", y = "Number ofobservations", fill= "Level of injury") +
  theme(legend.position = "bottom")
year_2018 <- years %>% filter(YEAR == 2018) %>% ggplot(mapping = aes(x = YEAR, fill = INJU
  labs(x = "Season", y = "Number ofobservations", fill= "Level of injury") +
  theme(legend.position = "bottom") +
  facet_wrap(vars(YEAR), scales = "free")

year_2017 + year_2018
```


2018
Number ofobservations
60
40
20
0
2017
Season
Number ofobservations
50
40
30
20
10
0
2018
Season
el of injury
Fatal
Major
Level of injury
Fatal
Major
Minor