NYPD Shooting

2025-02-25

```
# Load the necessary libraries
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.5.1     v tibble    3.2.1
## v lubridate 1.9.4     v tidyr     1.3.1
## v purrr     1.0.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(lubridate)
library(ggplot2)
library(dplyr)
library(scales)
```

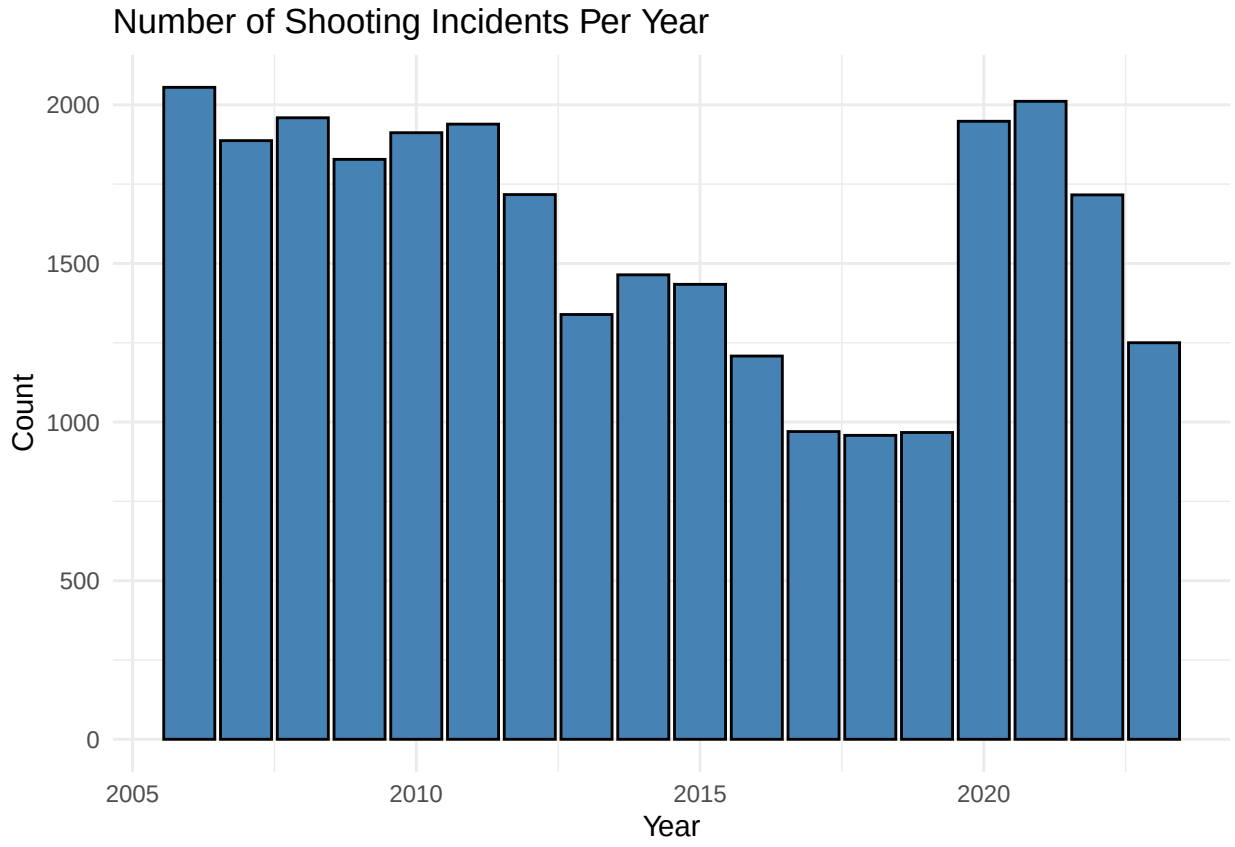
```
##
## Attaching package: 'scales'
##
## The following object is masked from 'package:purrr':
##
##     discard
##
## The following object is masked from 'package:readr':
##
##     col_factor
```

```
library(readr)
library(patchwork)
```

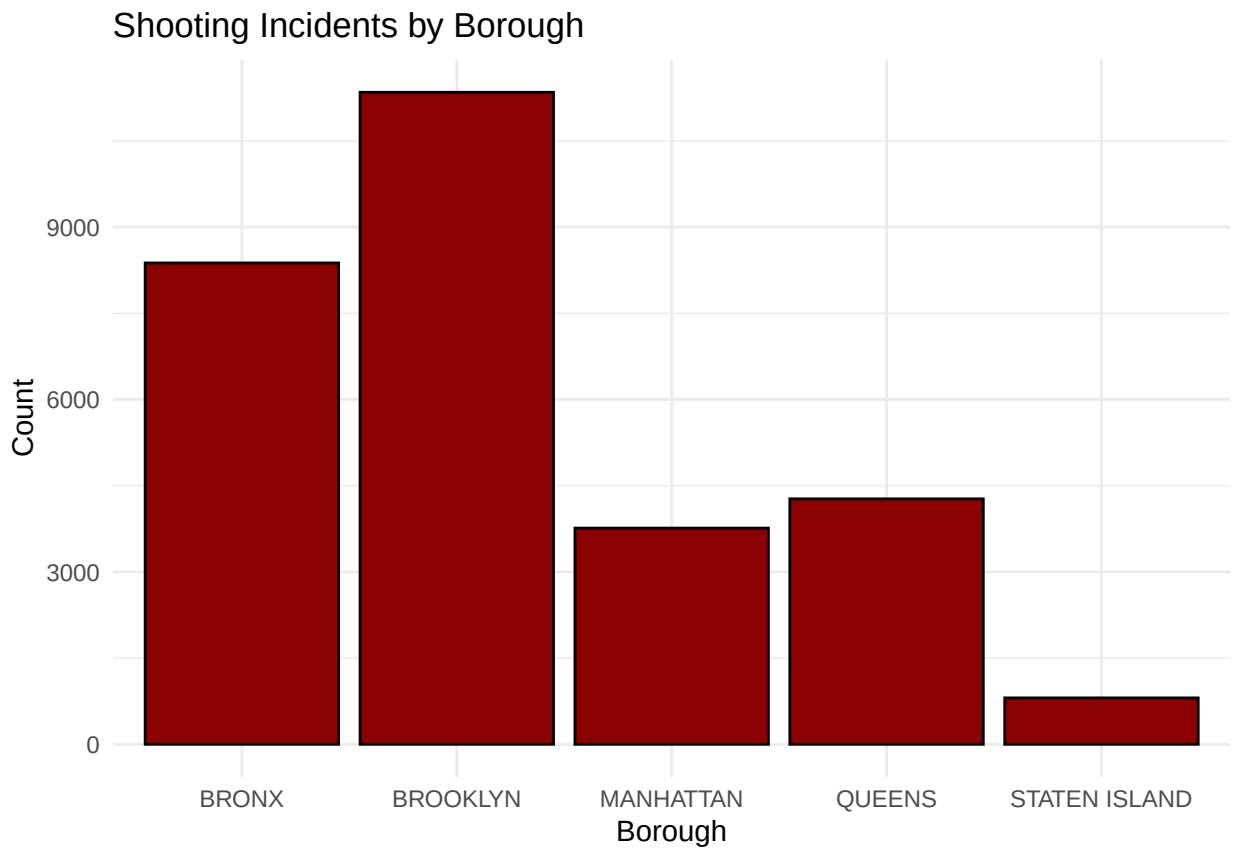
```
# Load the dataset
df <- read.csv("NYPD_Shooting_Incident_Data__Historic_.csv", stringsAsFactors = FALSE)

# View the structure of the dataset
str(df)
```

```
## 'data.frame':    28562 obs. of  21 variables:
##  $ INCIDENT_KEY           : int  244608249 247542571 84967535 202853370 27078636 230311078 229224142
##  $ OCCUR_DATE             : chr  "05/05/2022" "07/04/2022" "05/27/2012" "09/24/2019" ...
```

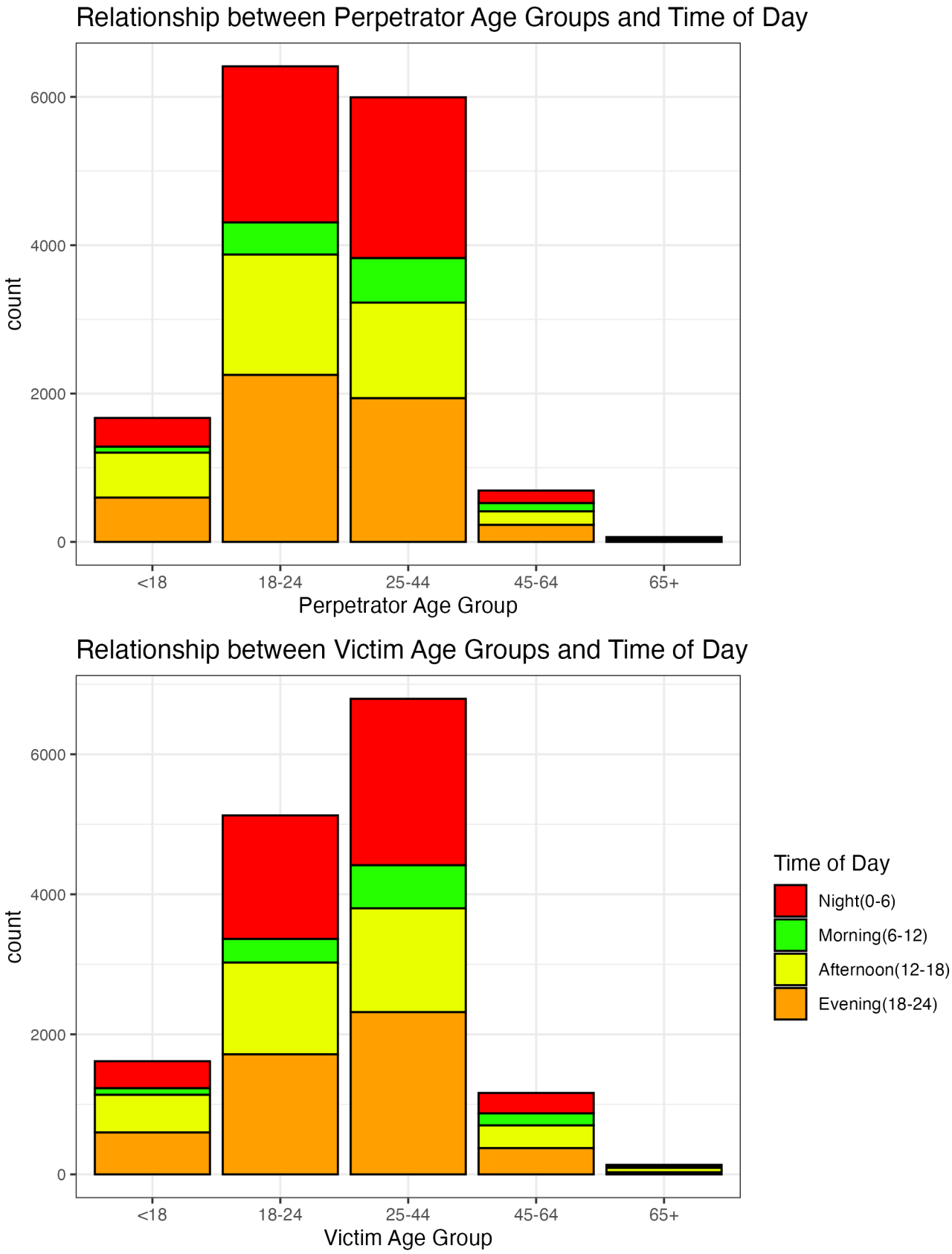
```
##  $ OCCUR_TIME            : chr  "00:10:00" "22:20:00" "19:35:00" "21:00:00" ...
##  $ BORO                  : chr  "MANHATTAN" "BRONX" "QUEENS" "BRONX" ...
##  $ LOC_OF_OCCUR_DESC     : chr  "INSIDE" "OUTSIDE" "" "" ...
##  $ PRECINCT              : int  14 48 103 42 83 23 113 77 48 49 ...
##  $ JURISDICTION_CODE     : int  0 0 0 0 0 2 0 0 0 0 ...
##  $ LOC_CLASSFCTN_DESC    : chr  "COMMERCIAL" "STREET" "" "" ...
##  $ LOCATION_DESC         : chr  "VIDEO STORE" "(null)" "" "" ...
##  $ STATISTICAL_MURDER_FLAG: chr  "true" "true" "false" "false" ...
##  $ PERP_AGE_GROUP        : chr  "25-44" "(null)" "" "25-44" ...
##  $ PERP_SEX              : chr  "M" "(null)" "" "M" ...
##  $ PERP_RACE             : chr  "BLACK" "(null)" "" "UNKNOWN" ...
##  $ VIC_AGE_GROUP         : chr  "25-44" "18-24" "18-24" "25-44" ...
##  $ VIC_SEX               : chr  "M" "M" "M" "M" ...
##  $ VIC_RACE              : chr  "BLACK" "BLACK" "BLACK" "BLACK" ...
##  $ X_COORD_CD            : num  986050 1016802 1048632 1014493 1009149 ...
##  $ Y_COORD_CD            : num  214231 250581 198262 242565 190105 ...
##  $ Latitude              : num  40.8 40.9 40.7 40.8 40.7 ...
##  $ Longitude             : num  -74 -73.9 -73.8 -73.9 -73.9 ...
##  $ Lon_Lat               : chr  "POINT (-73.9935 40.754692)" "POINT (-73.88233 40.854402)" "POINT (
```

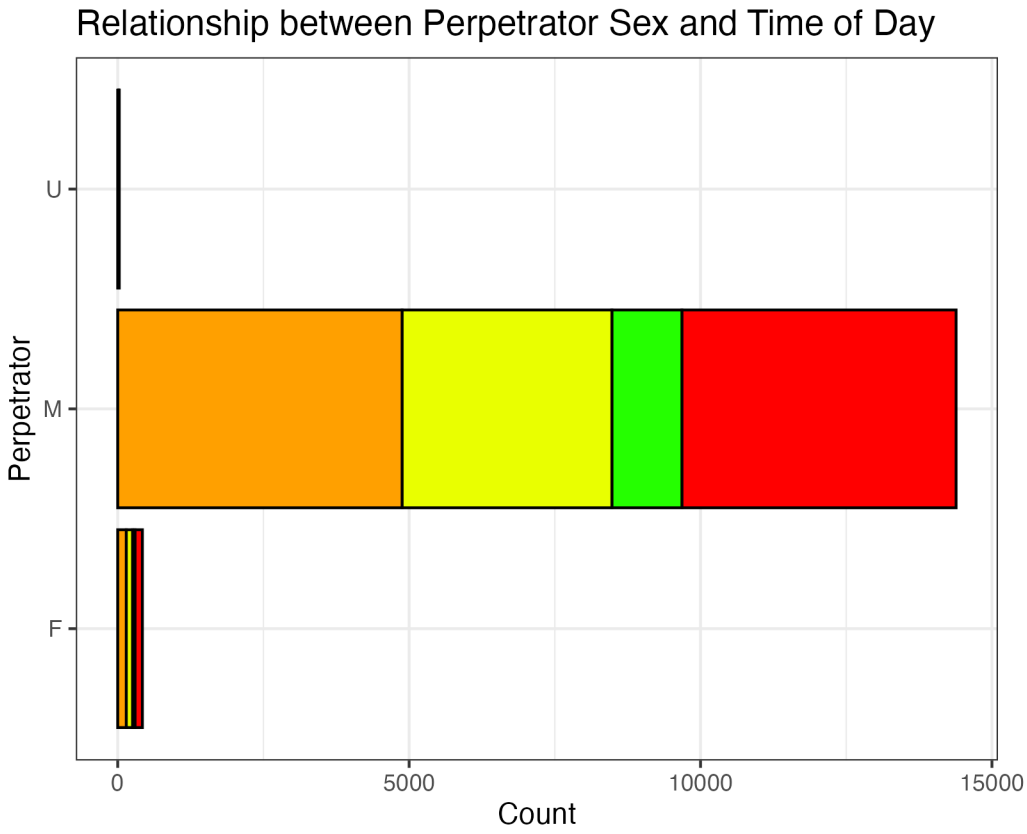


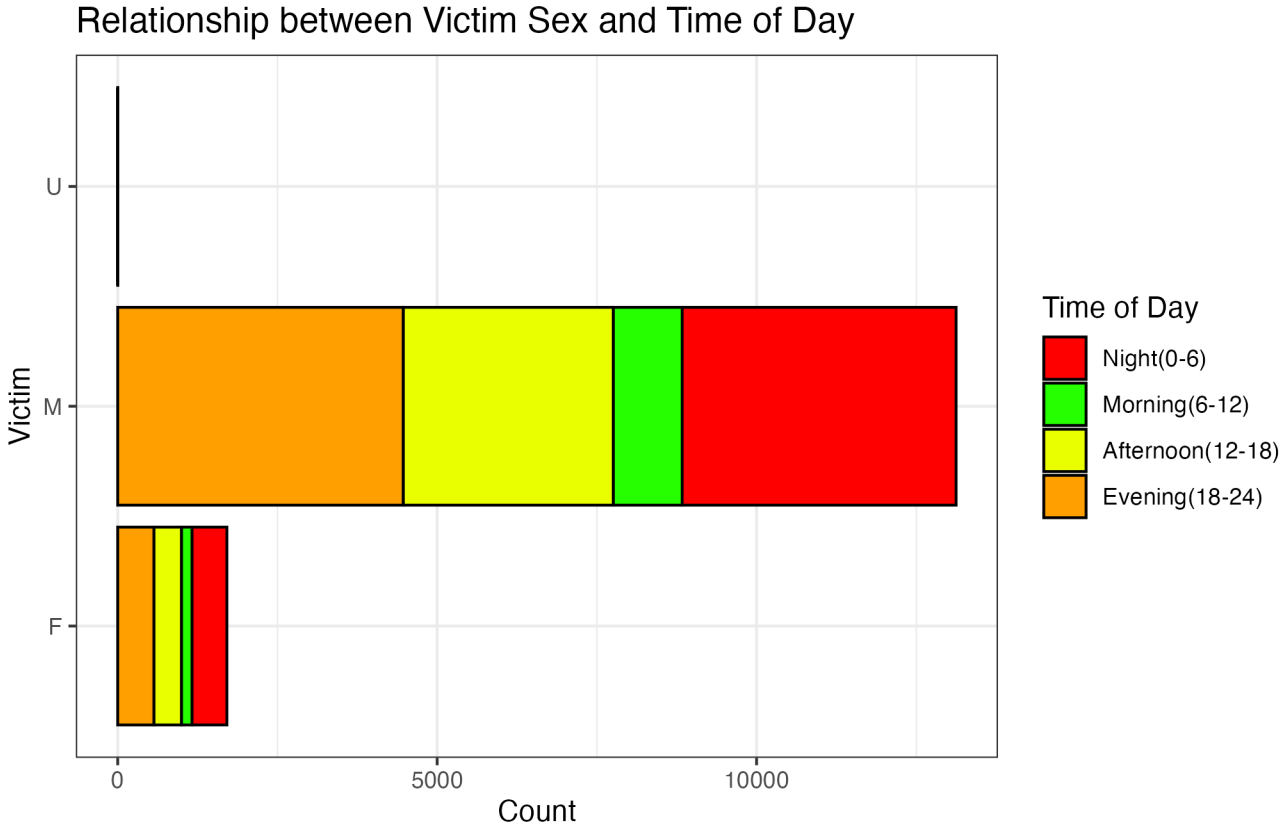

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     958    1272    1716    1587    1932    2055
```

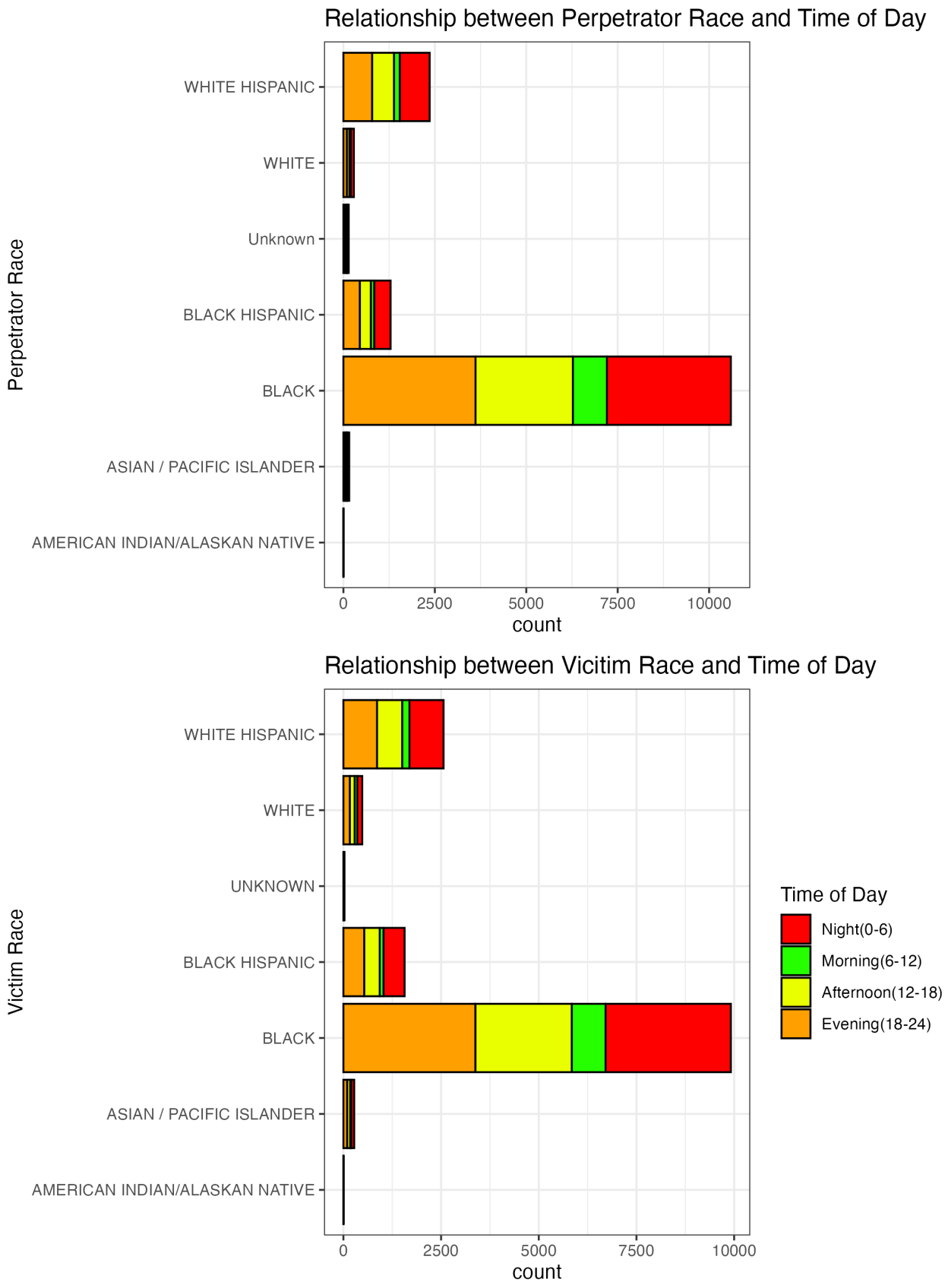



```
## # A tibble: 5 x 2
##   BORO          count
##   <chr>         <int>
## 1 BRONX          8376
## 2 BROOKLYN      11346
## 3 MANHATTAN      3762
## 4 QUEENS         4271
## 5 STATEN ISLAND   807
```


Relationship between Perpetrator Age Groups and Time of Day
count
6000
4000
2000
0
<18
18-24
25-44
45-64
65+
Perpetrator Age Group
Relationship between Victim Age Groups and Time of Day
count
6000
4000
2000
0
<18
18-24
25-44
45-64
65+
Victim Age Group
Time of Day
Night(0-6)
Morning(6-12)
Afternoon(12-18)
Evening(18-24)


Relationship between Perpetrator Sex and Time of Day
Perpetrator
U
M
F
0
5000
10000
15000
Count


Relationship between Victim Sex and Time of Day
Victim
U
M
F
0
5000
10000
Count
Time of Day
Night(0-6)
Morning(6-12)
Afternoon(12-18)
Evening(18-24)


Relationship between Perpetrator Race and Time of Day
Perpetrator Race
WHITE HISPANIC
WHITE
Unknown
BLACK HISPANIC
BLACK
ASIAN / PACIFIC ISLANDER
AMERICAN INDIAN/ALASKAN NATIVE
0
2500
5000
7500
10000
count
Relationship between Vicitim Race and Time of Day
Victim Race
WHITE HISPANIC
WHITE
UNKNOWN
BLACK HISPANIC
BLACK
ASIAN / PACIFIC ISLANDER
AMERICAN INDIAN/ALASKAN NATIVE
0
2500
5000
7500
10000
count
Time of Day
Night(0-6)
Morning(6-12)
Afternoon(12-18)
Evening(18-24)