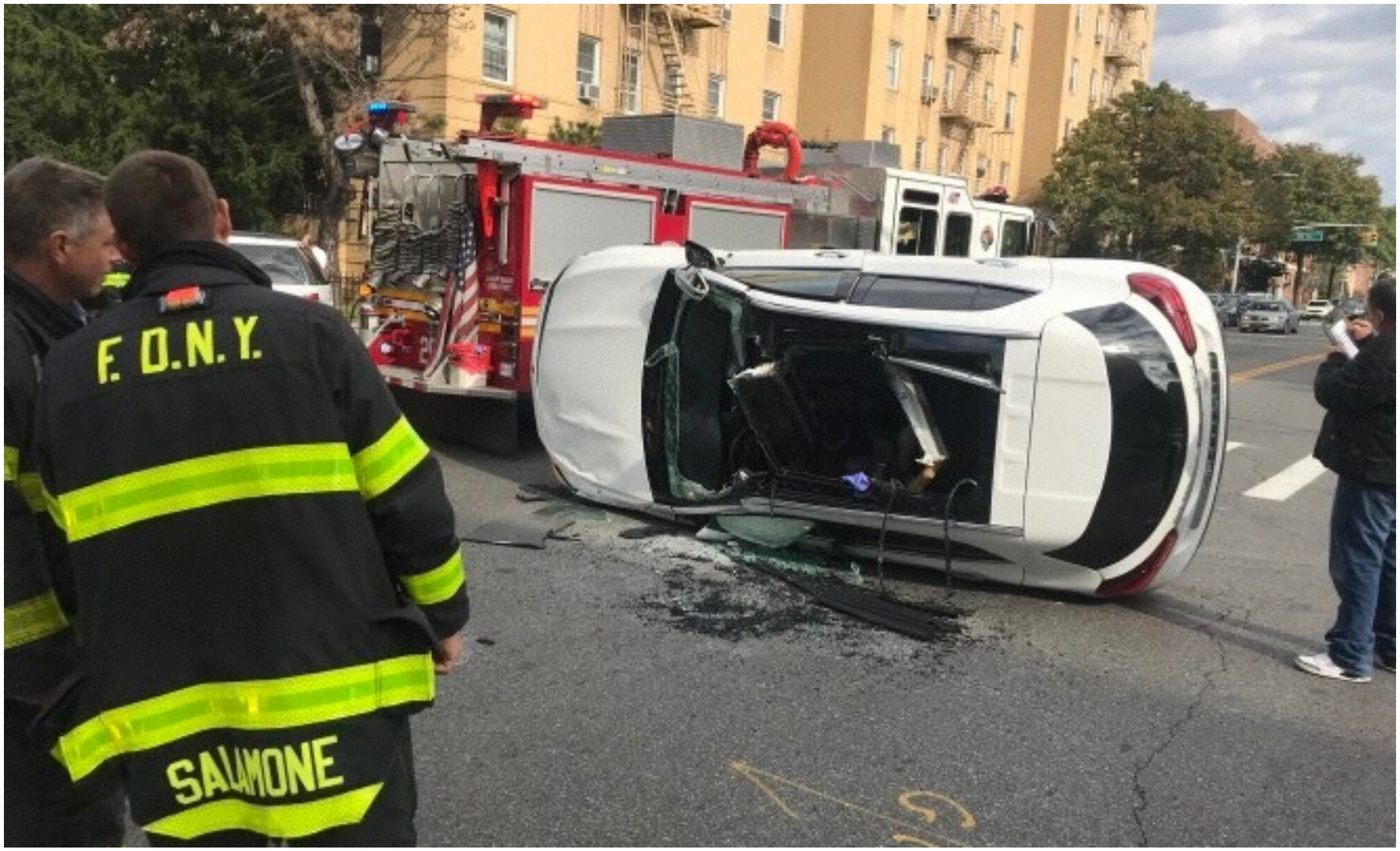
Reducing Accidents in Brooklyn

Analysis of New York Motor Vehicle Collisions, using data provided provided by the Police Department (NYPD) from 2012 to the present.

Overview & Background



Road fatalities are on the rise in NYC. This year, there are roughly 560 crashes per day in New York City.

Brooklyn accidents heat map - all time

Driver inattention/ distraction is a top collision factor.

This is true for Brooklyn and also for NYC overall.

```
#top collision factors by borough
df_agg2 = all_dataC.groupby(['borough', 'collision_factor']).agg({'count':sum})
g2 = df_agg2['count'].groupby(level=0, group_keys=False)
g2.nlargest(5)
```

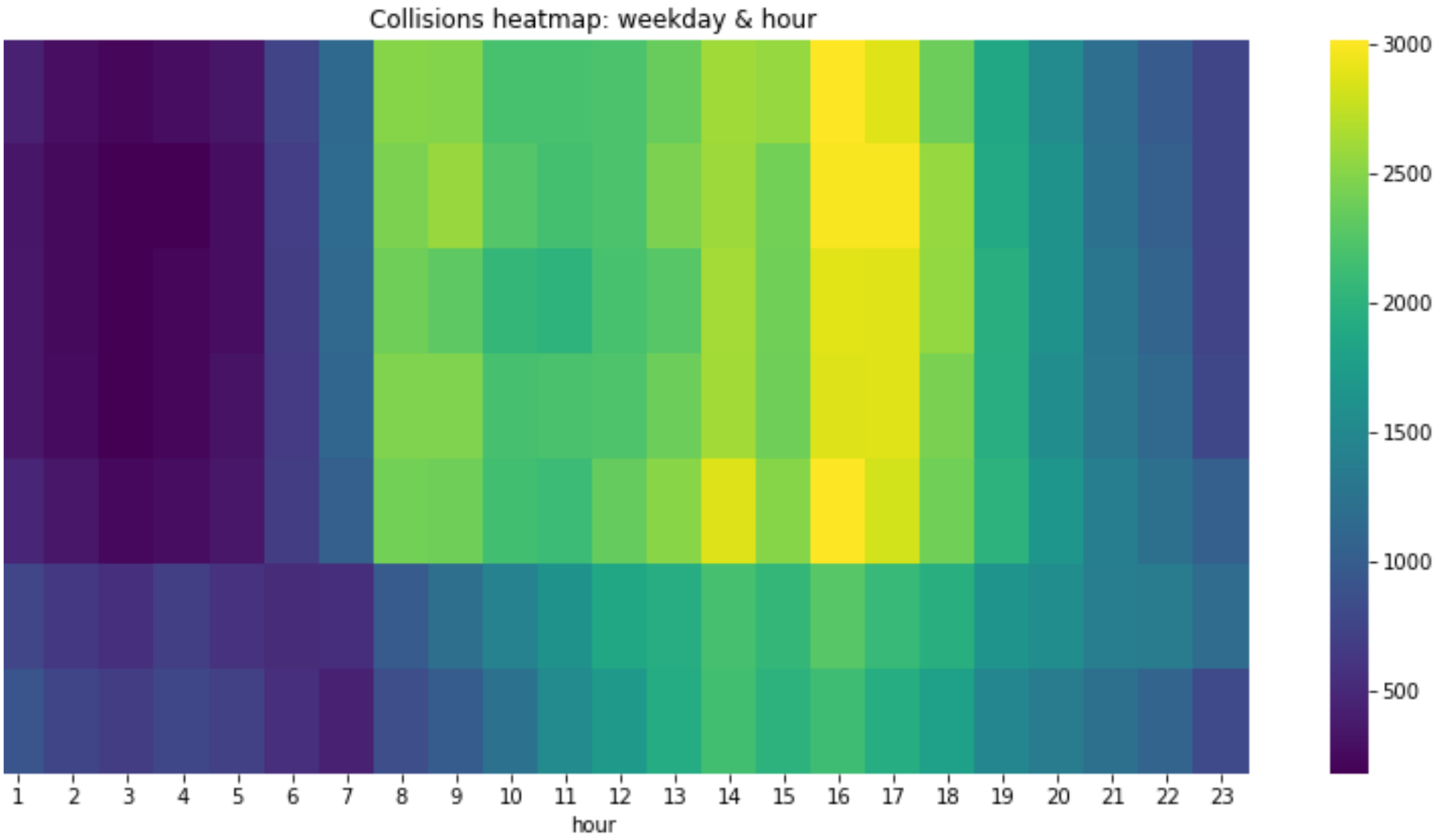
```
borough        collision_factor
BRONX          Driver Inattention/Distraction    14248
               Other Vehicular                    4241
               Failure to Yield Right-of-Way      4177
               Backing Unsafely                   3982
               Fatigued/Drowsy                    2341
BROOKLYN       Driver Inattention/Distraction    30524
               Failure to Yield Right-of-Way     14382
               Backing Unsafely                   8805
               Fatigued/Drowsy                    7870
               Lost Consciousness                 5020
MANHATTAN      Driver Inattention/Distraction    34731
               Other Vehicular                   13935
               Failure to Yield Right-of-Way      8771
               Turning Improperly                 8471
               Fatigued/Drowsy                    8424
QUEENS         Driver Inattention/Distraction    35360
               Failure to Yield Right-of-Way     15116
               Backing Unsafely                   9028
               Fatigued/Drowsy                    6398
               Following Too Closely              3470
STATEN ISLAND  Driver Inattention/Distraction     5782
               Failure to Yield Right-of-Way      1856
               Backing Unsafely                   1299
               Fatigued/Drowsy                    1157
               Other Vehicular                     884
Name: count, dtype: int64
```

and this is true across the years for which this data has been recorded.

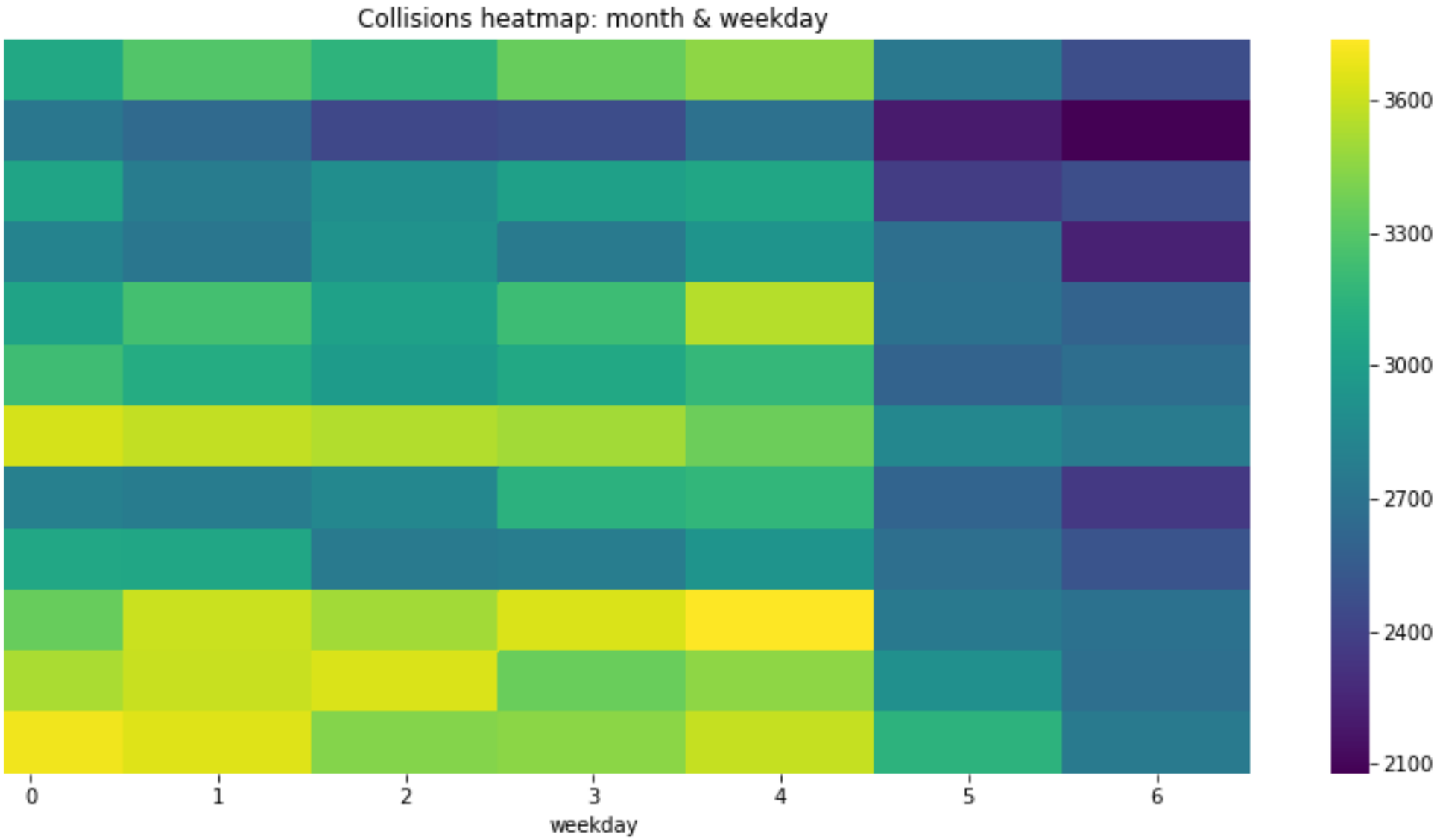
Exploratory Data Analysis

```
#top collision factors by year, by borough
df_agg = all_dataC.groupby(['borough','year', 'collision_factor']).agg({'count':sum})
g = df_agg['count'].groupby(level=0, group_keys=False)
g.nlargest(5)
```

```
borough        year  collision_factor
BRONX          2017  Driver Inattention/Distraction    3464
               2015  Driver Inattention/Distraction    3049
               2016  Driver Inattention/Distraction    2451
               2013  Driver Inattention/Distraction    2108
               2014  Driver Inattention/Distraction    2027
BROOKLYN       2017  Driver Inattention/Distraction    9254
               2015  Driver Inattention/Distraction    5781
               2016  Driver Inattention/Distraction    5298
               2014  Driver Inattention/Distraction    4426
               2013  Driver Inattention/Distraction    3513
MANHATTAN      2017  Driver Inattention/Distraction    8697
               2015  Driver Inattention/Distraction    6772
               2014  Driver Inattention/Distraction    5595
               2013  Driver Inattention/Distraction    5413
               2016  Driver Inattention/Distraction    5361
QUEENS         2017  Driver Inattention/Distraction    9609
               2015  Driver Inattention/Distraction    6798
               2016  Driver Inattention/Distraction    6189
               2014  Driver Inattention/Distraction    5354
               2013  Driver Inattention/Distraction    4735
STATEN ISLAND  2017  Driver Inattention/Distraction    1611
               2016  Driver Inattention/Distraction    1069
               2015  Driver Inattention/Distraction     974
               2014  Driver Inattention/Distraction     880
               2013  Driver Inattention/Distraction     795
```



Accidents occur most during business hours

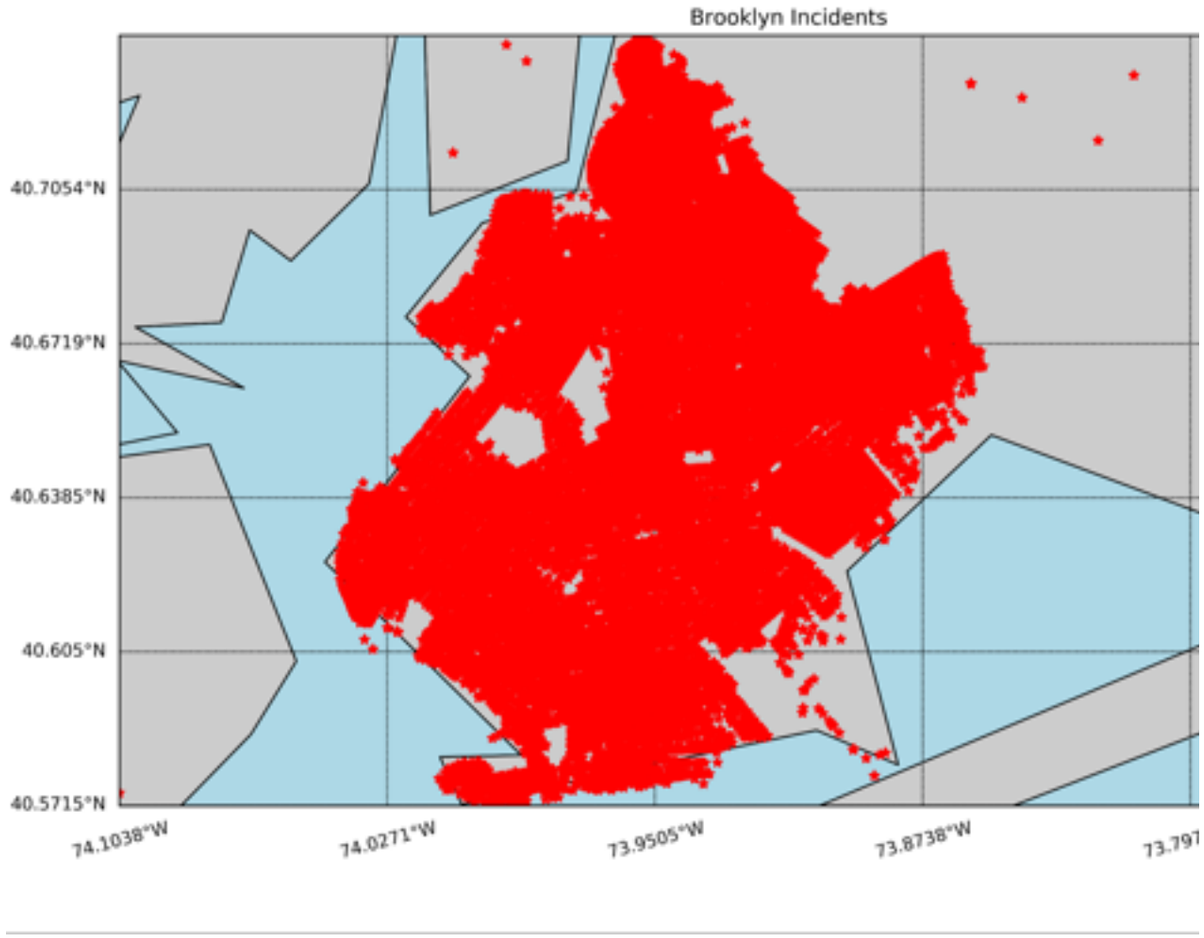


Accidents occur most during the workweek.

Proposal

As driver inattention/ distraction is a top collision factor and as accidents occur most during the workweek's business hours…

we propose a data based public awareness campaign focused on reducing driver distractions.



In fact, on Apr 9, 2019 the Governor's Traffic Safety Committee, GTSC, launched a Distracted Driving PSA Campaign in NYC. The campaign will be featured on billboards, television, and radio.

We recommend airing the campaign during peak commute hours. Additionally, we recommend including social media in the campaign mediums. Last, given available data on zip codes with greater traffic accidents, we recommend messaging placement in the following zip codes: 11207, 11201, 11203.

We believe this campaign will have an impact on the number of collisions overall. And, we believe that this campaign may see a reduction in the number of pedestrians and cyclists injured during mater vehicle collision accidents.