



NYC TRAFFIC VIOLATIONS

Dandi Chen | George Chen | Akankshi Mody

Sahana Subramanian | Kachi Ugo | Yuke Liu

1.

DATASET DESCRIPTION

Dataset Description

Data Source

Kaggle - NYC
Department of Finance

43 columns

10M + rows

Content

Data on traffic ticket
issued in NYC for fiscal
year **2016-2017**

Columns Include:

Registration State

Violation Code

Issue Date

Street Name

2.

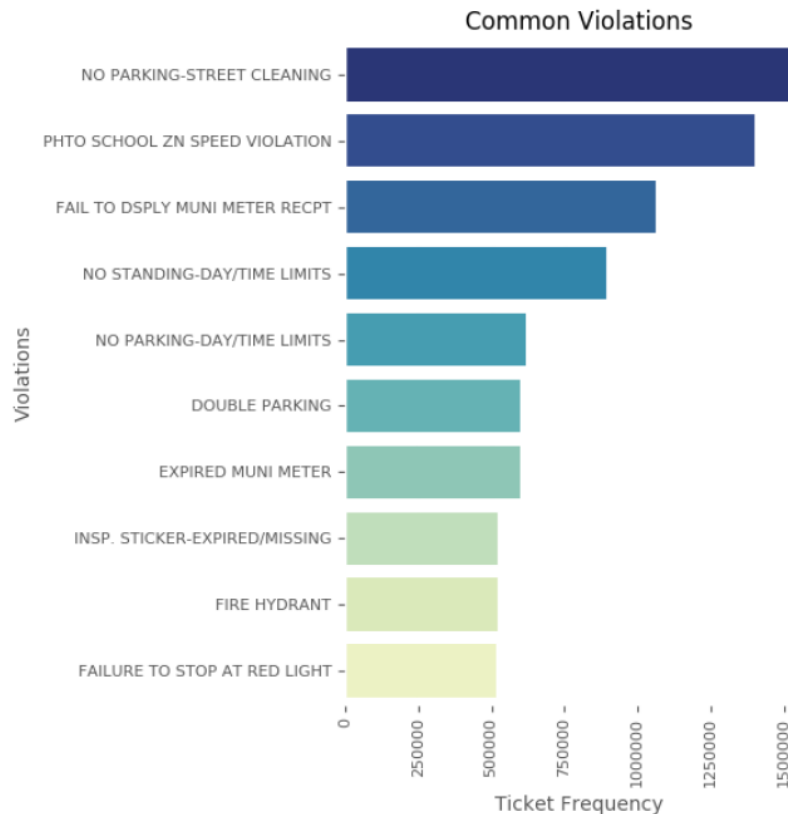
TOOLS USED

Tools Used



3. EXPLORATORY DATA ANALYSIS

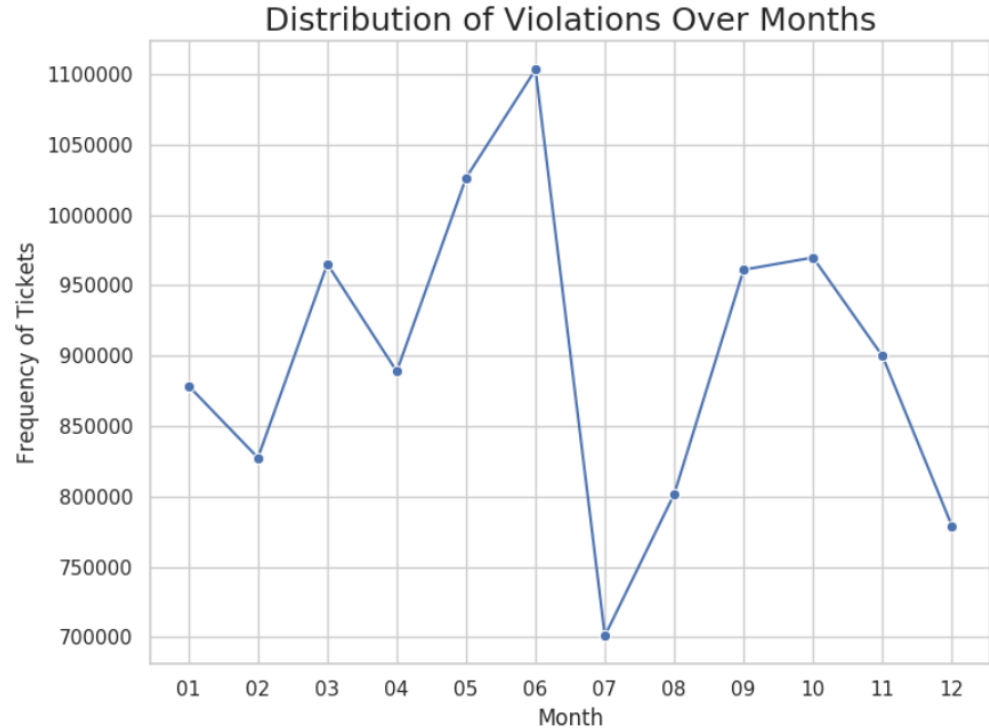
Most Common Violations



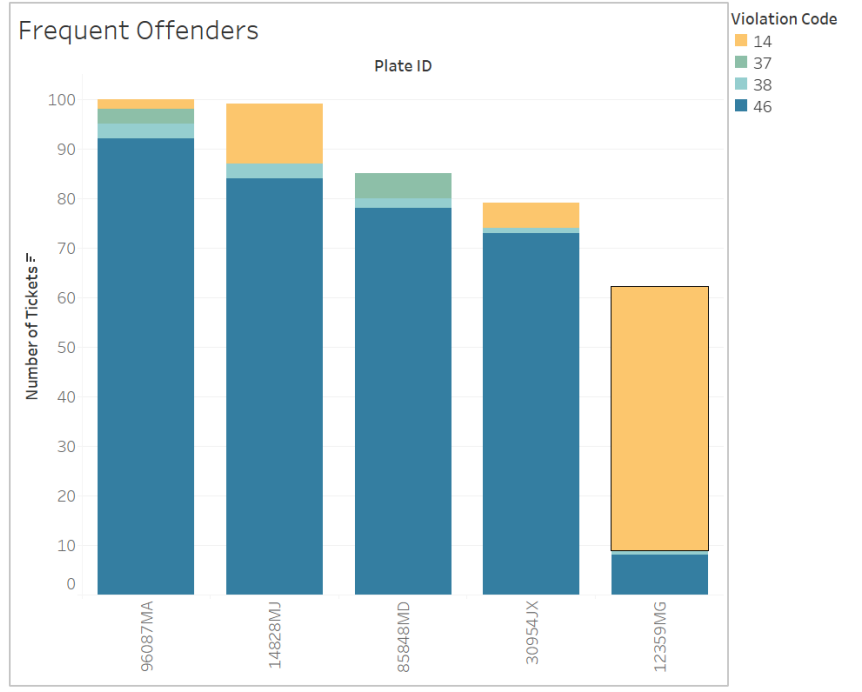
Trend throughout the year

Summer months of **May** and **June** have highest violations (maybe due to increase in tourists)

December has lowest violations maybe because of the holidays



Frequent Offenders



- 14** - No Standing - Day/Time Limits
- 37** - Expired Muni Meter
- 38** - Fail to display Muni Meter Receipt
- 46** - Double Parking

Vehicle Registration States

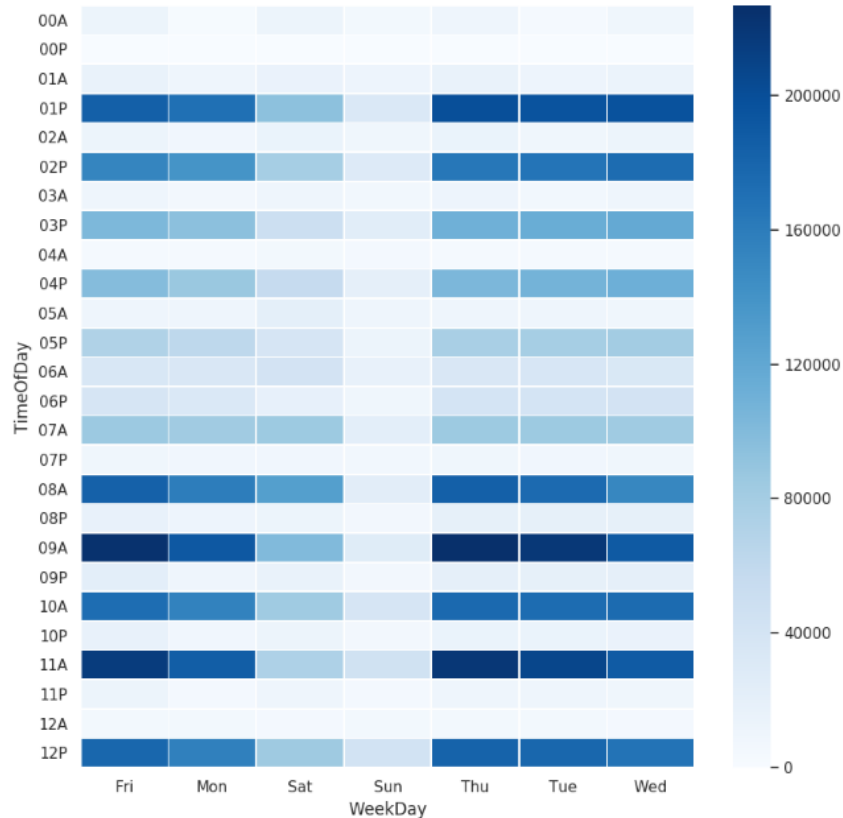


4.

HYPOTHESIS

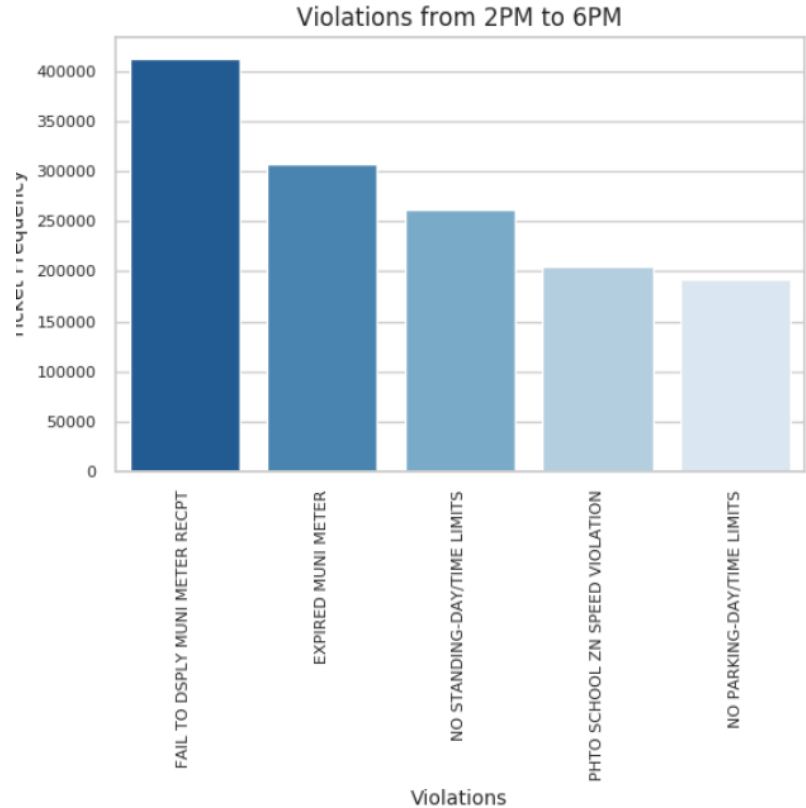
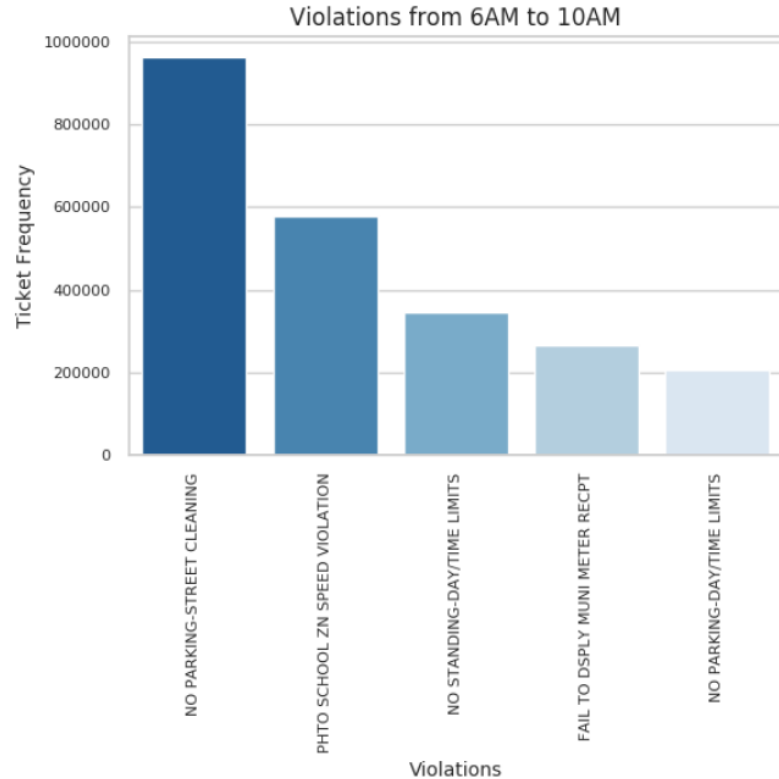
Effect of Time of Day

Number of Violations with respect to time

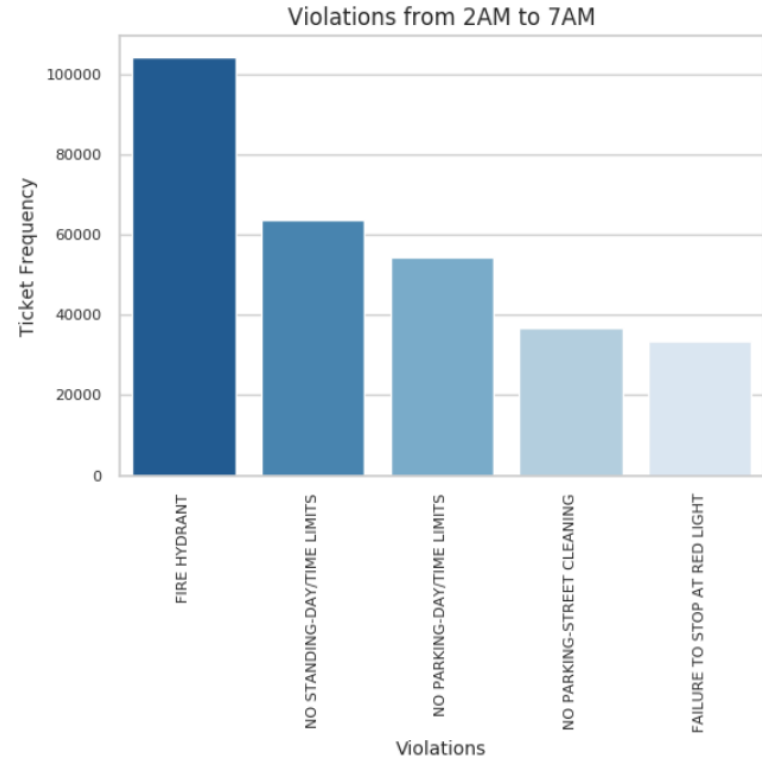
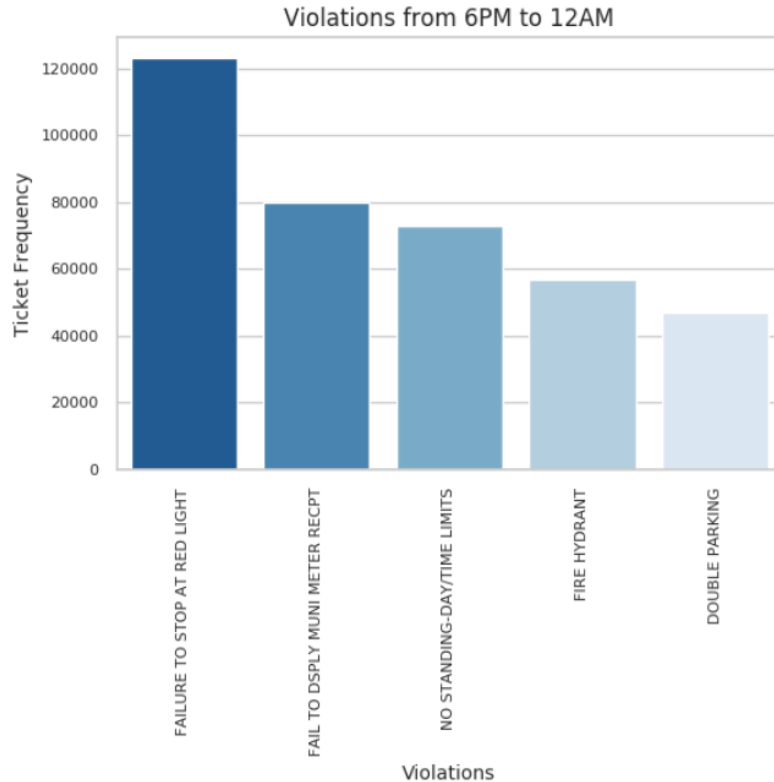


Highest violations occur on
Weekdays between **8AM**
and **12PM**

Most Common Violations During Various Timeframes



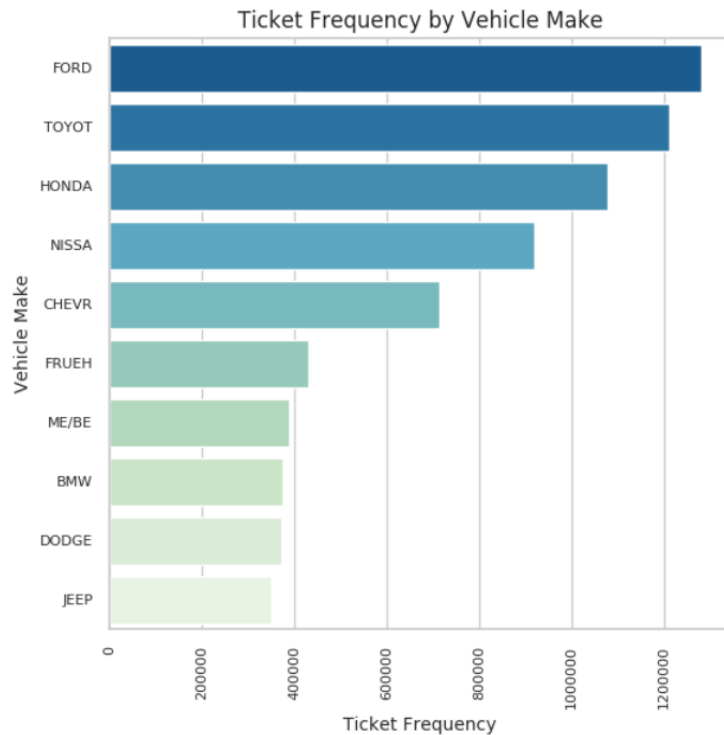
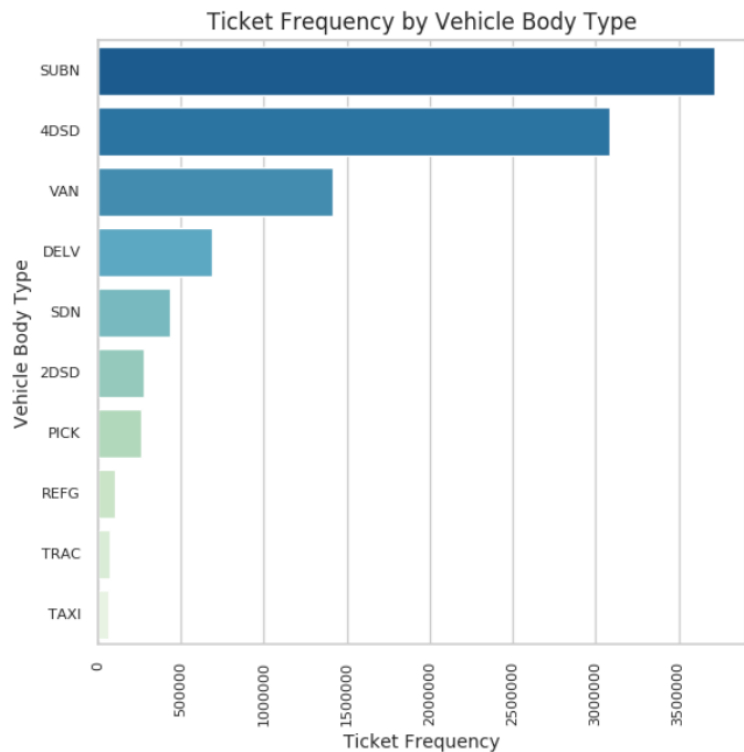
Most Common Violations During Various Timeframes



5.

HYPOTHESIS Relation to Vehicle Type/Brand

Most Common Vehicle Types



Fruehauf Trailers

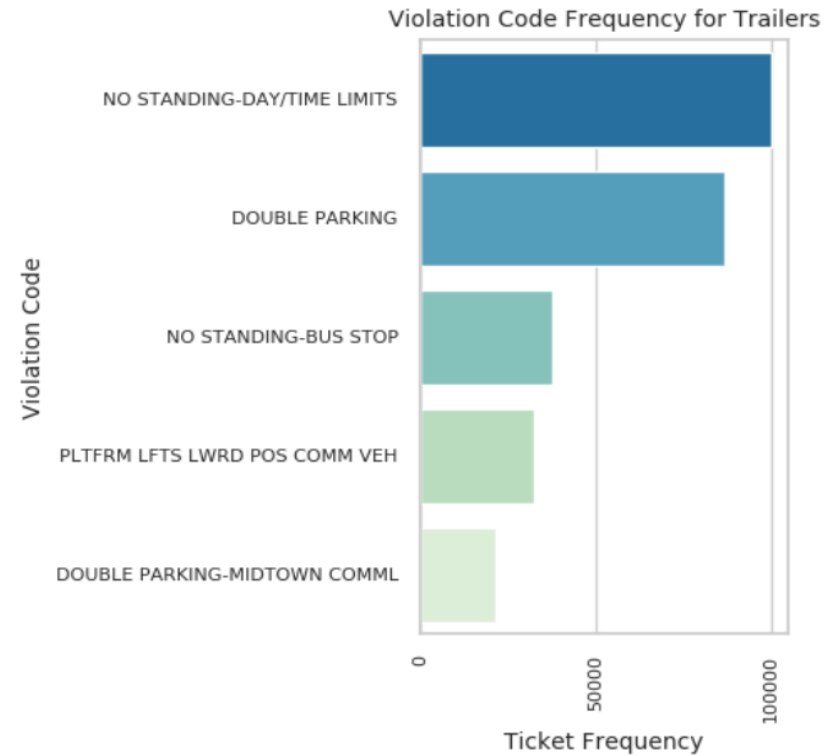
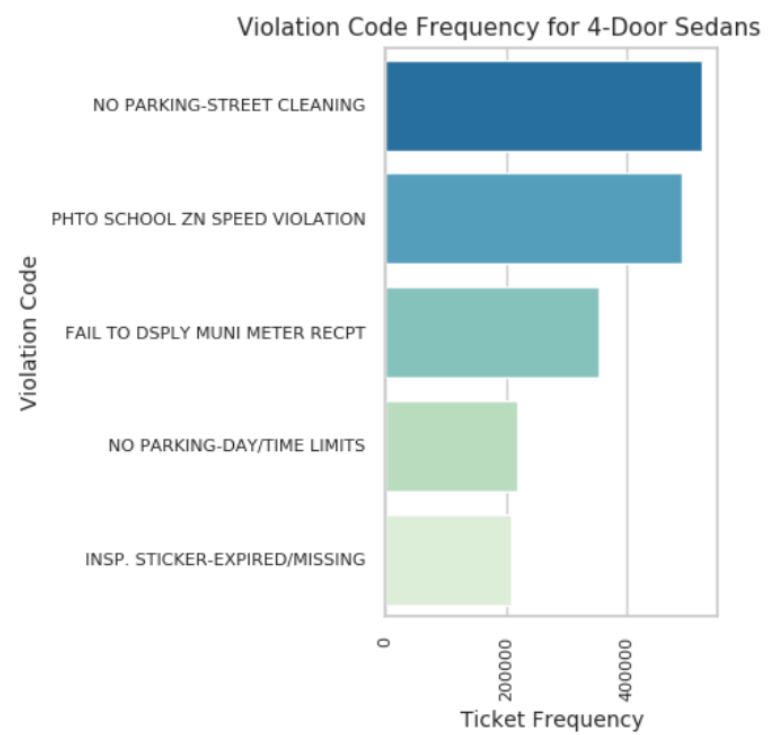


August Fruehauf is credited with inventing the semi-trailer in 1914.

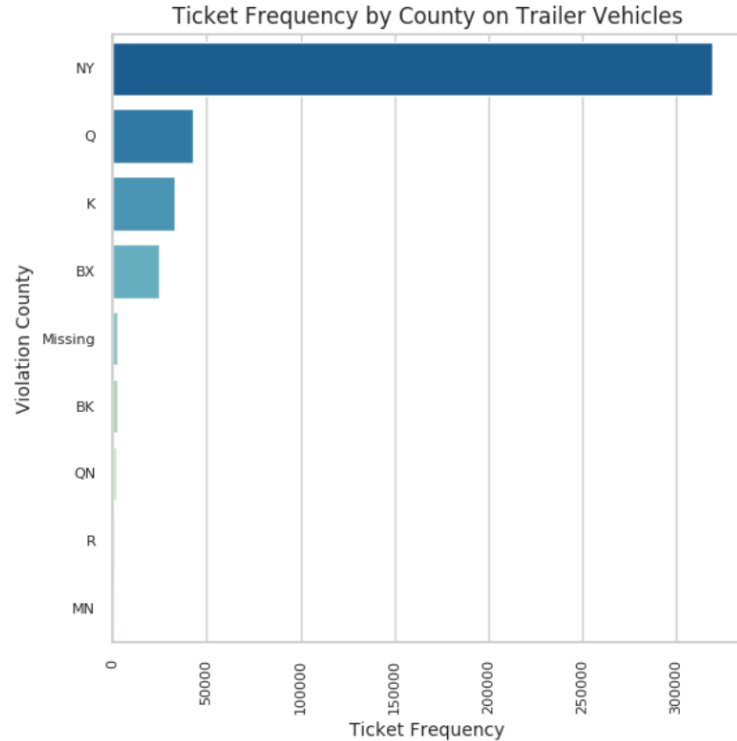
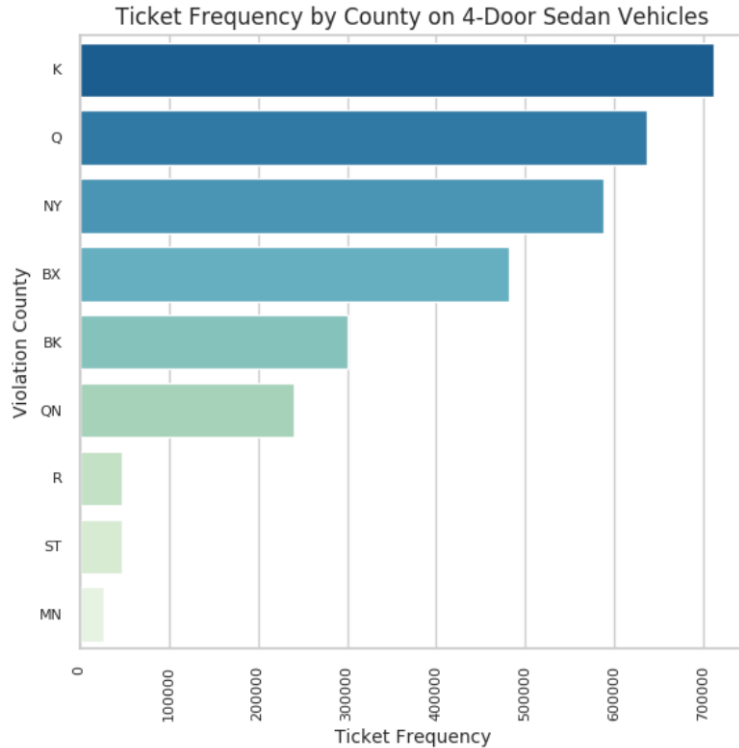
Founded in 1918 and soon became one of the largest and most successful semi-trailer companies in the world.

Kenworth Tractor & Fruehauf Trailer From Movie "Smokey And The Bandit." Courtesy Of Singingwheels.Com

Most Common Violation Codes By Vehicle Type



Most Common Counties By Vehicle Type



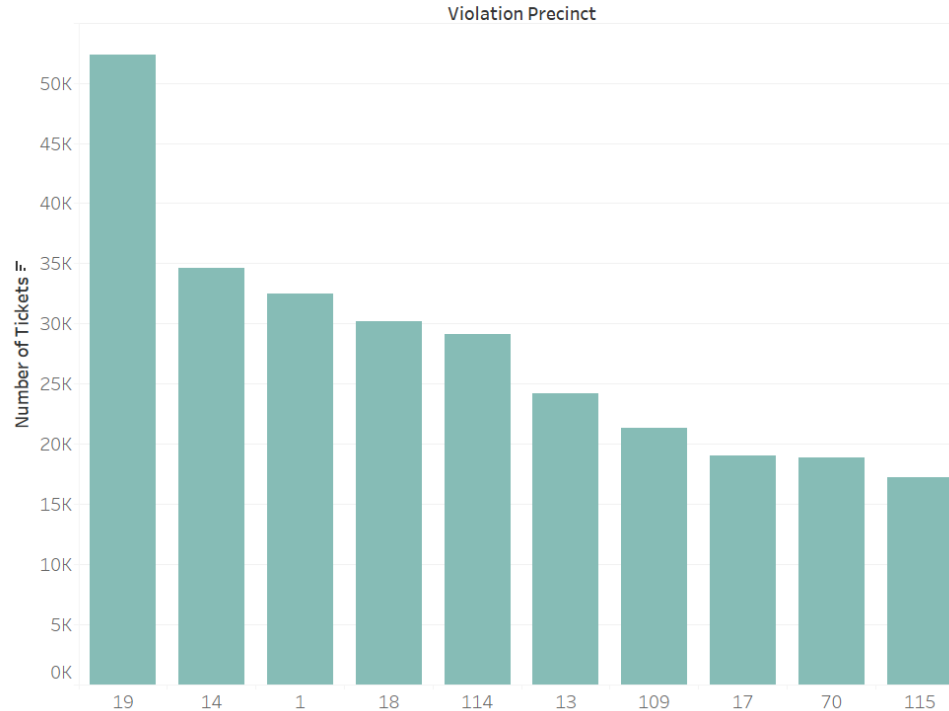
6.

HYPOTHESIS

Trends in Location

Most Common Precincts

Ticket Frequency by Precincts



19,14,1,18 - Belong to Manhattan

19th Precinct - Upper East Side of Manhattan (one of the most densely populated residential areas & with a large commercial area well known for shopping)

18th Precinct - Well known for entertainment

1st Precinct - WTC and Wall Street offices & popular amongst tourists

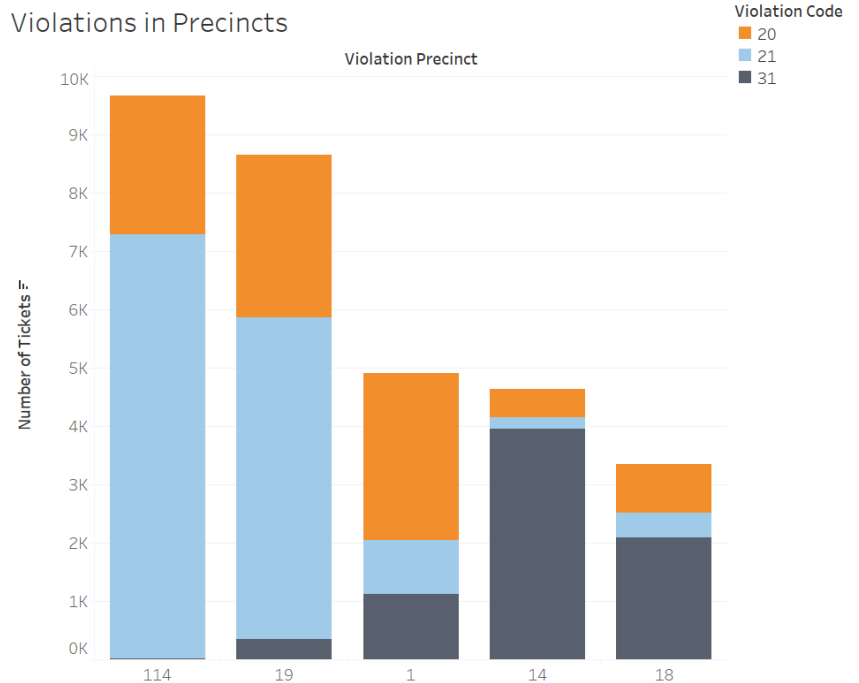
Most common Violations by Precinct

20 - No standing - Bus Stop

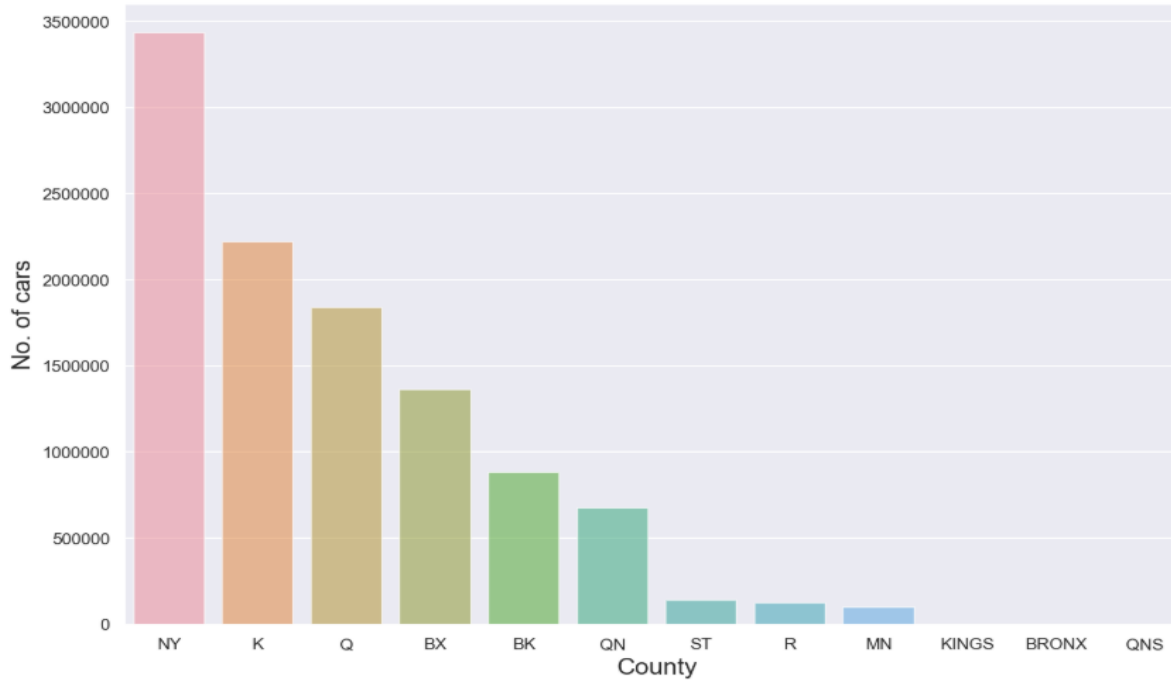
21 - No Parking - Day/Time Limits

31 - No Standing - Comm Meter Zone

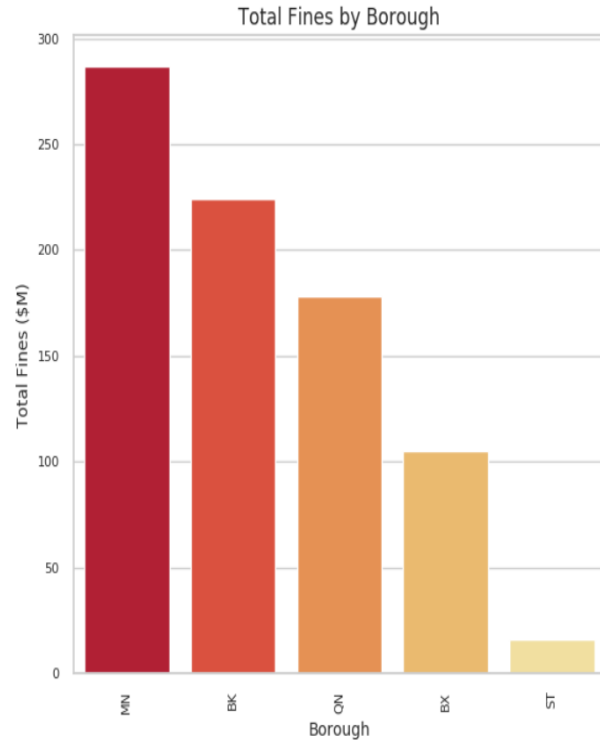
Violations in Precincts



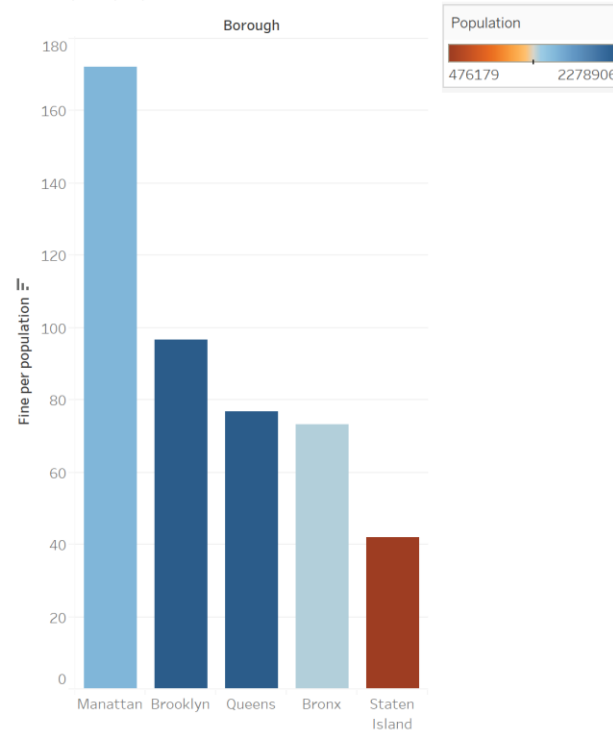
Most Common Counties for Violations



Fines per population



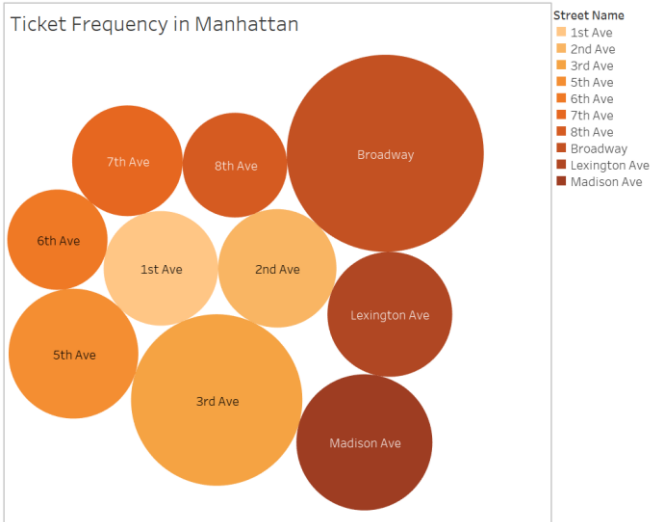
Fines per population



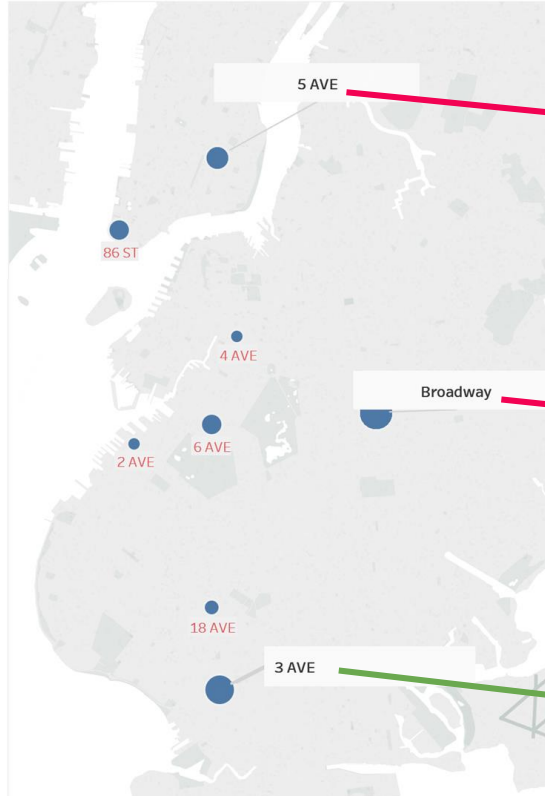
Correlation with availability of Parking Spaces

Can NYC reduce parking tickets by building more parking lots?

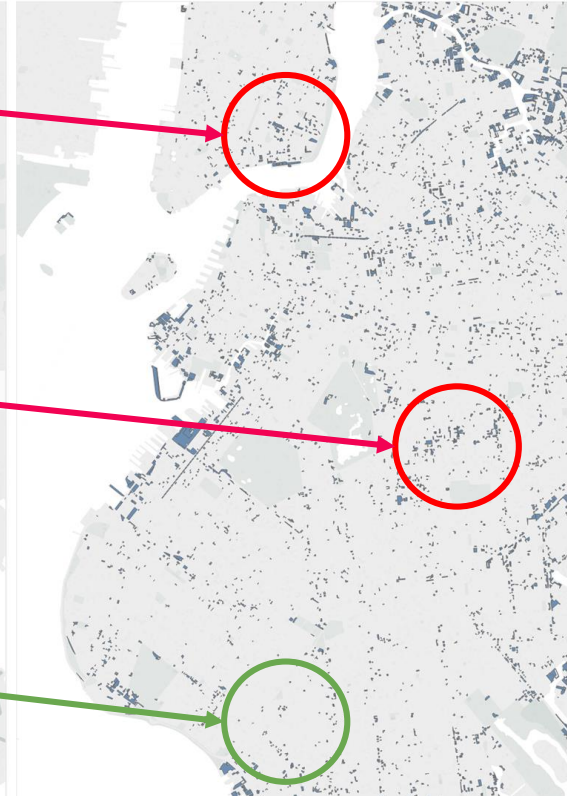
- Turn inconsistent income (ticket fines) into predictable income (garage rent)
- Can work out for 3rd AVE



Frequent Locations



Parking Spaces



7. CONCLUSION

Insights

Time of Day

From 6am - 10am: Street cleaning and school zone violations are most common

From 2pm - 6pm: Muni Meter violations are most common

From 6pm-12am : Red Light violations are most common

From 2am - 7am : Fire Hydrant violations

Vehicle Type

Violations committed by people who own Sedans are most common in Brooklyn and Queens while those by trailers are most common in the NY County

Most common violations for Sedans are No Parking - Street Cleaning and School zone speed violations whereas for Trailers they are No standing and Double Parking

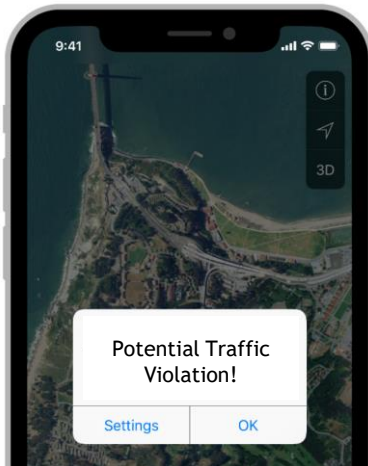
Location

Precincts with most violations are office spaces and areas popular with tourists

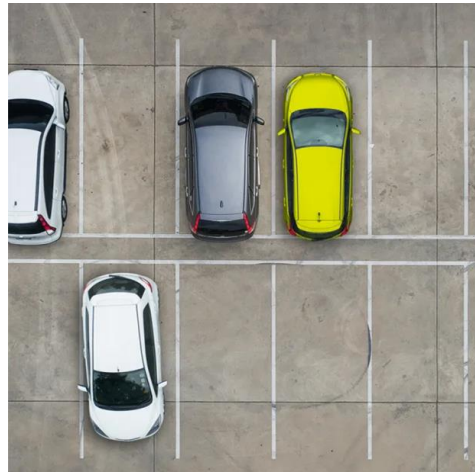
Locations with highest frequency of violations are related to the number of available open parking spaces

Business Applications

App Alerts for Traffic Violations



Building more parking spaces



Decision making and reducing administrative workload



Thanks!

Any questions?

We hope you enjoyed the presentation as much as we enjoyed making it.