

Analysis of the San Fransico TOLE Program

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```
rawTickets <- data.frame(read.csv('Muni_Driver_Reported_Transit_Only_Lane_Violations.csv', header = T,
tickets <- read.csv("tickets.csv")
```

Background on Dataset

General information and Data Collection

The Transit-Only Lane Enforcement (TOLE) is run by the San Fransico Municipal Transportation Agency (SFMTA) from March 2008 to February 2015 as a pilot program to reduce obstruction of transit-only lanes through increased enforcement. Currently, private and commerical vehicles that drive and park in transit-only lanes can cause delays in bus service, increase traffic jams, and inconveniencing customers.

Under the TOLE program, all public buses are equipped with video cameras to capture the license plates of vehicles parked or stopped in a dedicated transit-lane. The vehicle's registered owner will then recieve the ciation in the mail in aims to deter future transit-only lane violations. These citations and their details form the dataset we are examining. The data were obtained from the US government's open data site at <https://catalog.data.gov/dataset/muni-driver-reported-transit-only-lane-violations>.

San Fransico currently operates 26 miles transit-only lanes with 160,000 daily passsengers and planned future expansion of 22 miles, so the TOLE program has strong potential for long-term impact by increasing the efficiency of the municipal transity system and potentially increasing municipal revenue temporarily as drivers adjust to the enforcement scheme.

Background on dataset

The raw dataset contains the following variables regarding the transit-only lane violations:

- **Object.ID** – Unique key that corresponds to each observation
- **Ticket.Number** – Unique number that corresponds to each ticket catalogued with the Superior Court of San Francisco
- **Citation.Issue.Date** – The date (MM/DD/YY) that the traffic only lane violation citation was issued
- **Citation.Issue.Month** – The month (MM) that the traffic only lane violation citation was issued; This column was completely blank when downloaded
- **Citation.Issue.Time** – The time of day (HH:MM) PST that the traffic only lane violation citation was issued
- **Location** – The street address where the traffic only lane violation citation was issued
- **Violation.Code** – A code that corresponds to the type of traffic only lane violation that was committed to warrant issuing a citation
- **Violation** – Description of the traffic only lane violation issued in the citation
- **Fine.Amount** – The dollar amount of to be paid for the traffic only lane violation
- **Citation.Status** – Status of the citation (Open, Closed, Unapplied)
- **Amount.Paid** – The dollar amount paid for the traffic only lane violation
- **Amount.Due** – Outstanding balance for the traffic only lane violation
- **Suspend.Code** – Code that represents reason for license suspension (Suspended until the driver goes to driving school, pays fine, too many points on license, etc.)
- **Suspend.Process.Date** – Date the license suspension goes into effect

- `Suspend.Until.Date` – Date the license suspension is over
- `Disposition.Code` – The city of San Francisco does not release disposition codes
- `Last.Edited.Date` – Date that represents the last date the corresponding observation was edited; This column was completely blank when downloaded
- `Geom` – The latitude and longitude (latitutde, longitude) of the traffic only lane violation

NOTES:

TO-DO:

- something about Bills - ask Jack