

Presentation link: [https://youtu.be/baXxOzjo\\_-I](https://youtu.be/baXxOzjo_-I)

1. It appears that in accidents that resulted in the victim killed, about 46.3% of those accidents involve the airbag not deployed.
2. Younger parties in their twenties are more frequent in fatal traffic accidents of no airbag deployment.
3. Bicyclists in their early twenties appear the most frequent in these fatal accidents in which helmets are not used.

**Main Findings**



Are there certain safety attributes that contribute to fatal traffic accidents in Los Angeles?

What happens when safety behaviors like airbags or helmets are not deployed?

**Driving Questions**

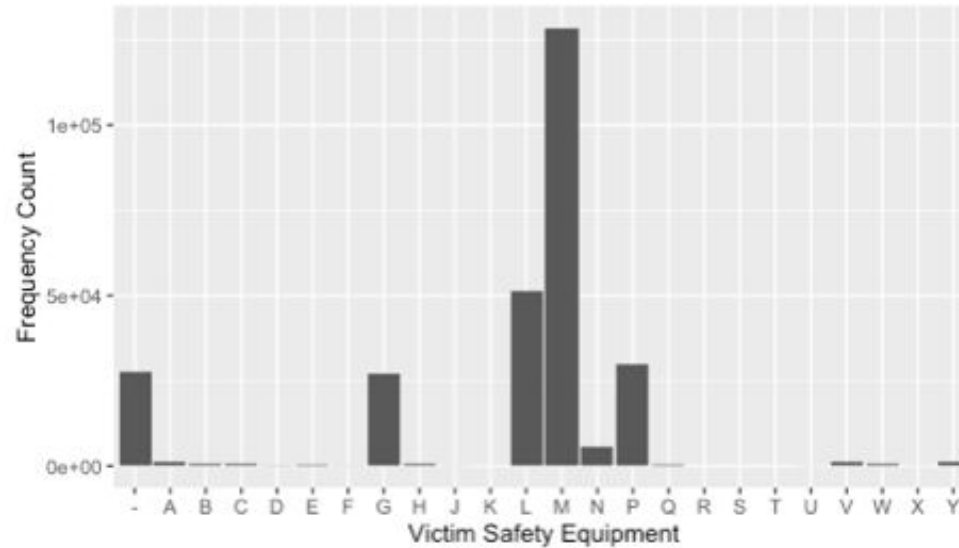


- 2012-2016 SWITRS (Statewide Integrated Traffic Records System) Data
- Accounts for collisions that occurred during that time frame within the City of Los Angeles' jurisdiction
- SWITRS data set is fairly large size (90 columns and 171,534 rows)
- Contains information on an abundance of various attributes associated with traffic collisions
- Analysis of traffic collisions in Los Angeles city can be conducted on, for example, the collision level, party level (driver, pedestrian, bicyclist, etc.), and/or victim levels.

**SWITRS Data Set**



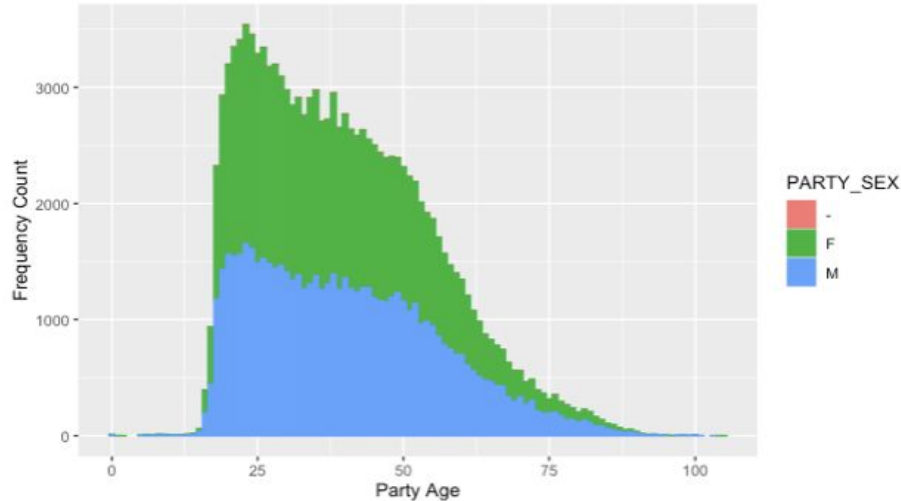
Based on our analysis, in accident that resulted in the victim killed (fatal), about 46.3% of those accidents involved the airbag not deployed (M in the graphic below) in Los Angeles.



## Airbag Analysis



According to the SWITRS sample, younger parties in their twenties are more frequent in fatal accidents of no airbag deployment. In addition, as shown in green on the graphic to the left, females are more frequently involved in these type of fatal accidents in Los Angeles.



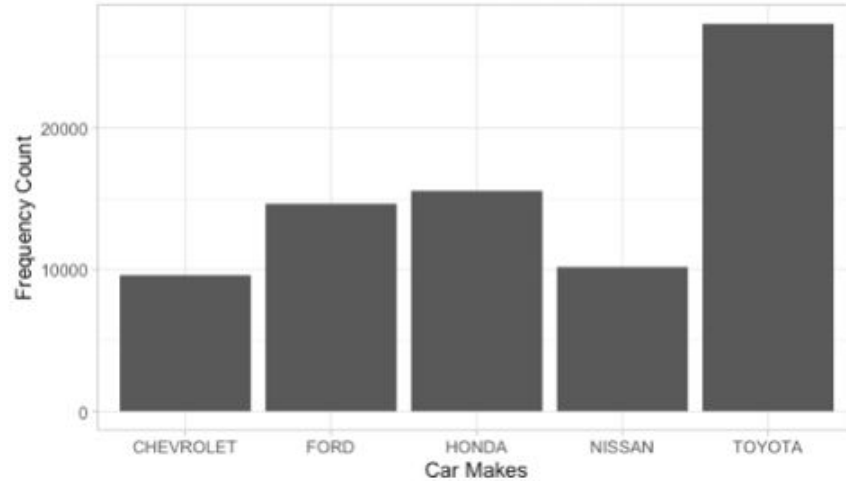
PARTY_AGE	number_parties_in_fatal_accidents
<dbl>	<int>
23	3543
24	3457
22	3411
21	3349
26	3344
25	3290
20	3202
28	3201
27	3181
29	3096

1-10 of 103 rows

## Airbag Analysis



Based the SWITRS data set, the Top 5 car makes in fatal instances in which the airbag was not deployed where in order of descending frequency: Toyota, Honda, Ford, Nissan, then Chevrolet.

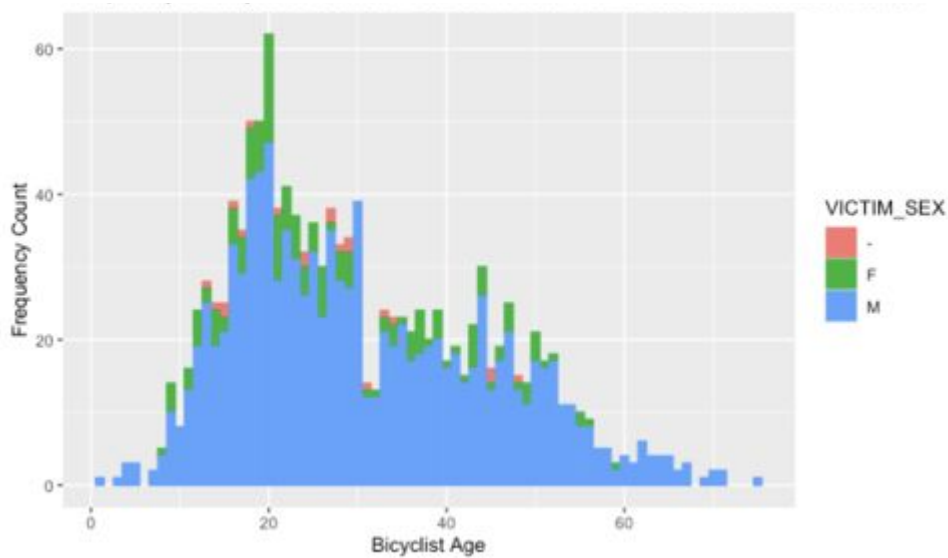


Source: [Consumer Reports Takata Airbag Recall](#)

## Airbag Analysis



As described in the SWITRS data set, bicyclist victims involved in fatal accidents and are not wearing a helmet is most common in bicyclist ages 18-20. In addition, based on our analysis, females in Los Angeles are more frequently involved in fatal accidents when not wearing a helmet compared to males.



Source: [California Bicycle Helmet Law](#)

## Helmet Analysis



## Airbags

1. Do car models associated with the Takata airbag recall align with non-airbag deployment accidents given in the SWITRS data set ?
2. Does the type of collision impact the probability of an airbag deploying?

## Helmets

3. Does wearing a helmet impact a scooter riders probability of surviving a fatal traffic-related injury or fatality?
4. Since the introduction of bike sharing programs, are there more bike-related traffic fatalities in Los Angeles?

**Further Research**

