
Los Angeles Crime

By

Breanna Ramos, Evelyn Ruiz Lopez, Mayra Varillas, Hayley Todd, and Justin Kim

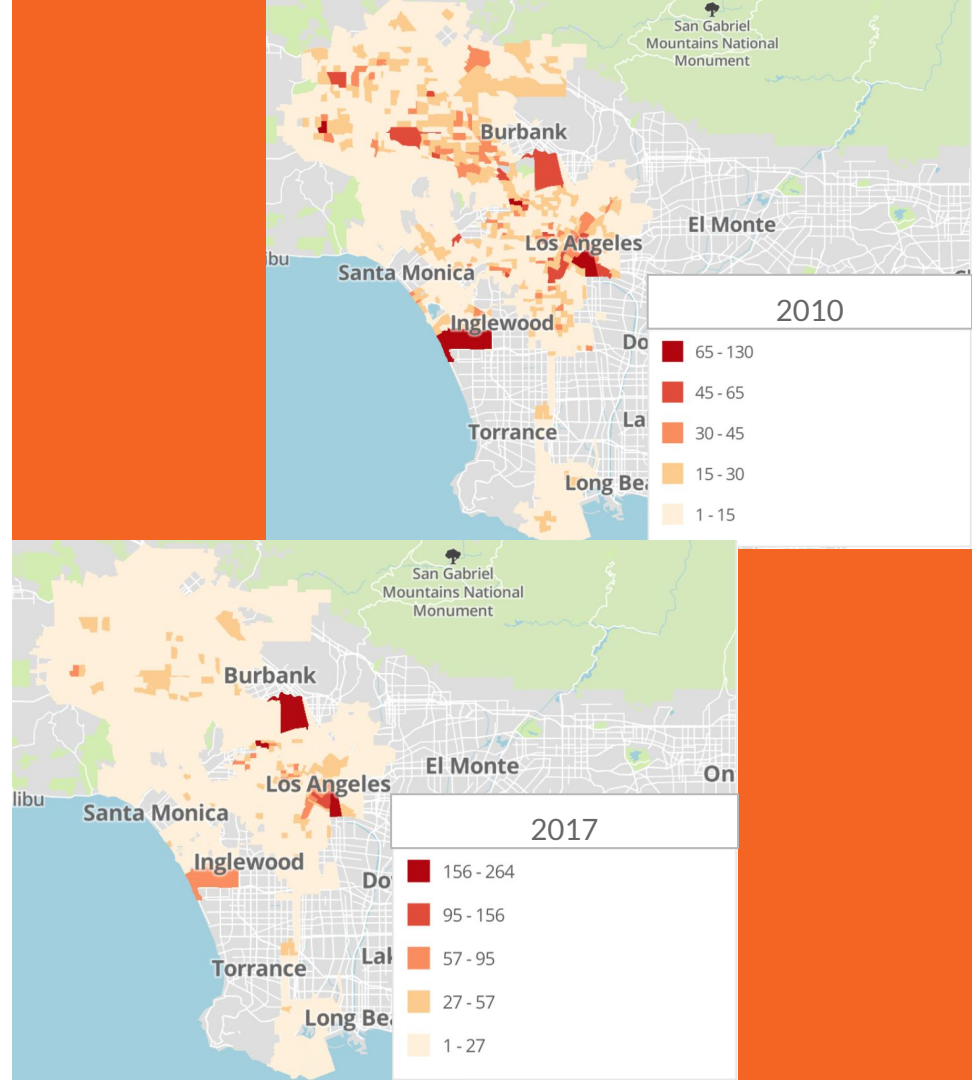
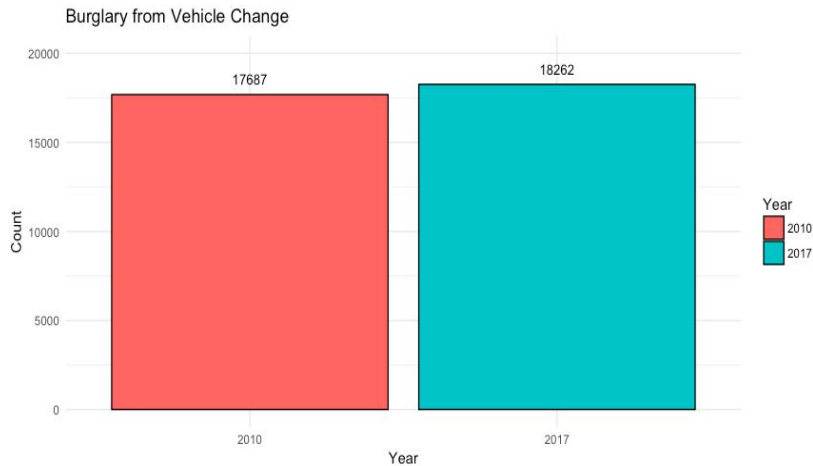


Our Question

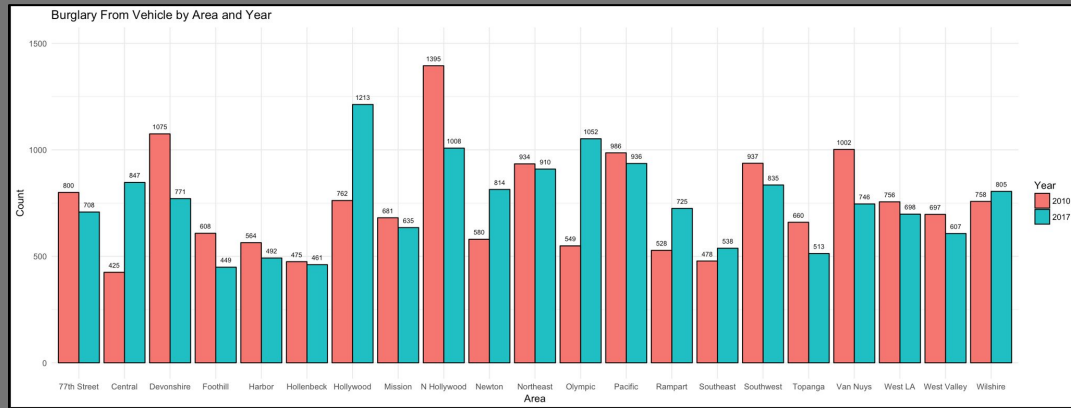
- Considering the advancements of vehicle technology between 2010 and 2017, have both the number of burglaries from vehicles and car collisions in Los Angeles decreased?

Analysis: Burglary From Vehicles

→ Burglary from vehicles has increased by only 3.25% since 2010



– A Breakdown by Area and Ethnicity

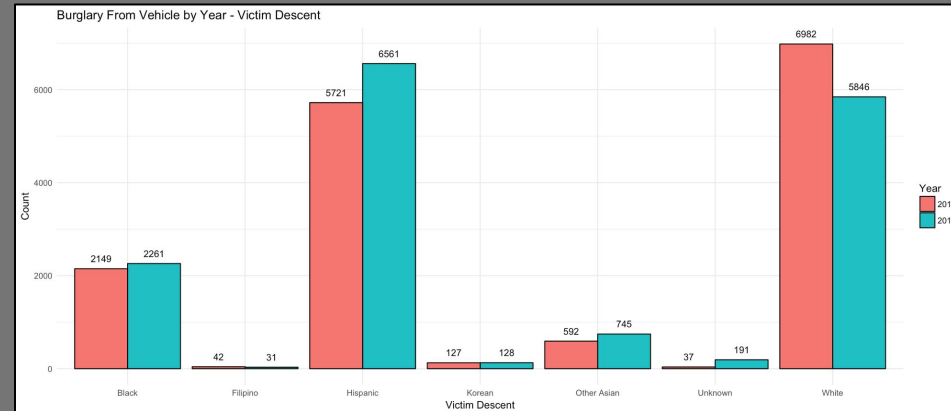


Top Left

- 21 police department divisions
- 13 areas decreased in burglaries from vehicles
- When taking population into account, burglaries from vehicle decreased

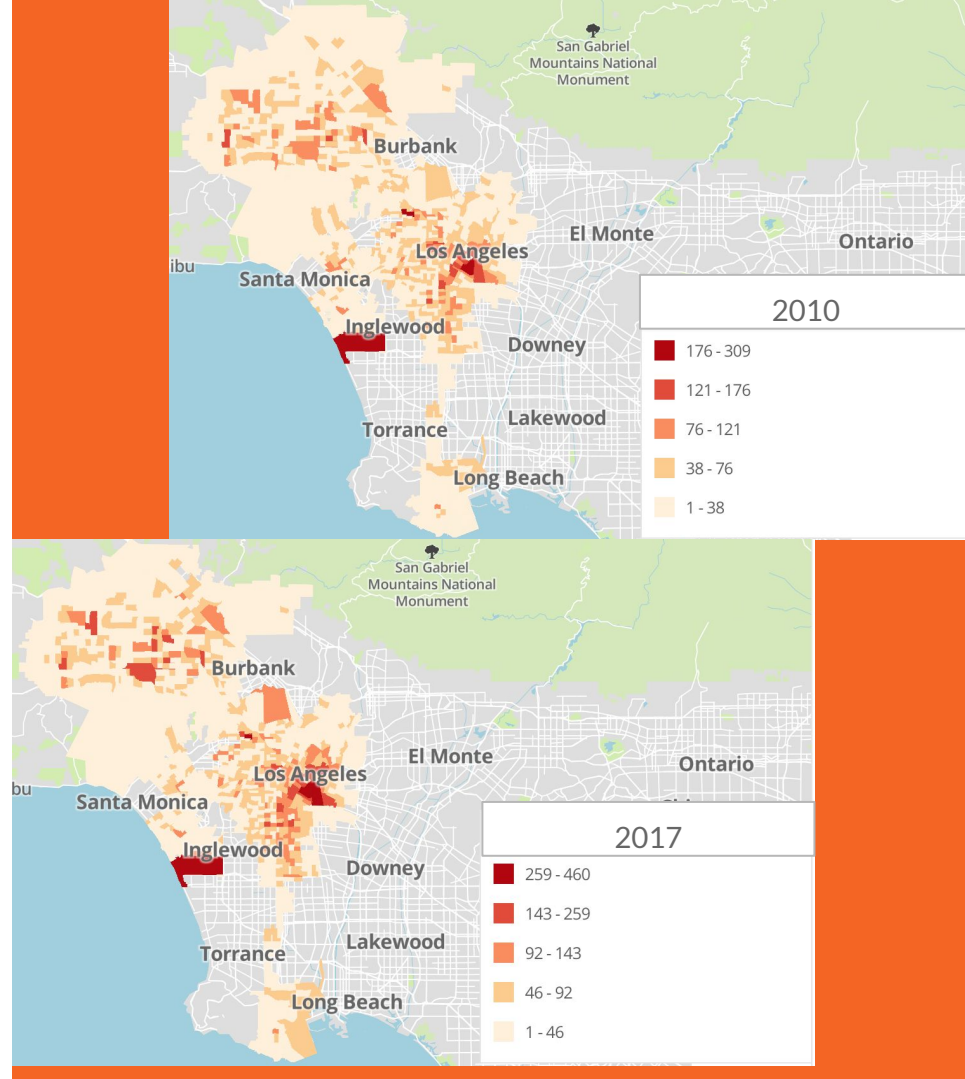
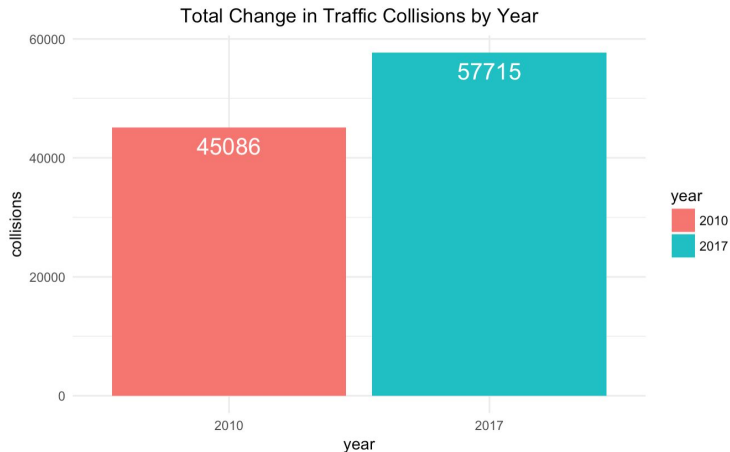
Bottom Right

- Largest **INCREASE** in victim descent: 15% (Hispanic)
- Largest **DECREASE** in victim descent: 16% (White)

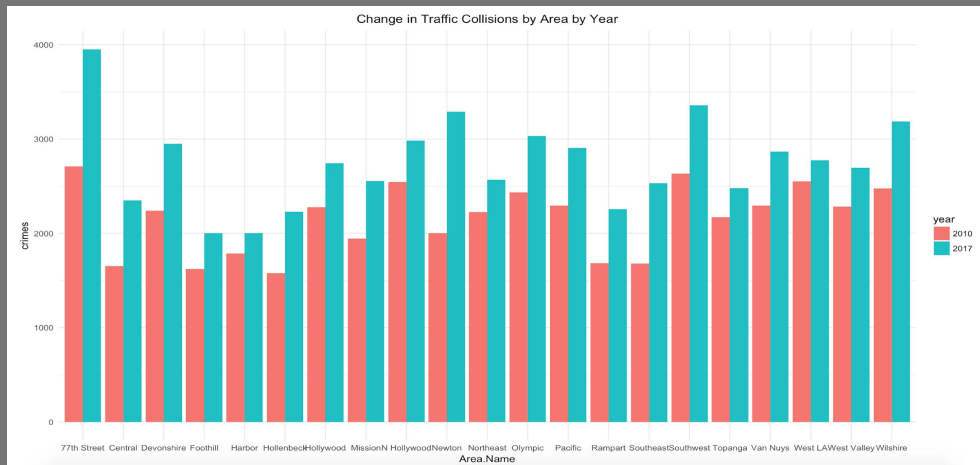


Analysis: Traffic Collisions

→ Traffic collisions have increased by approximately 28% since 2010

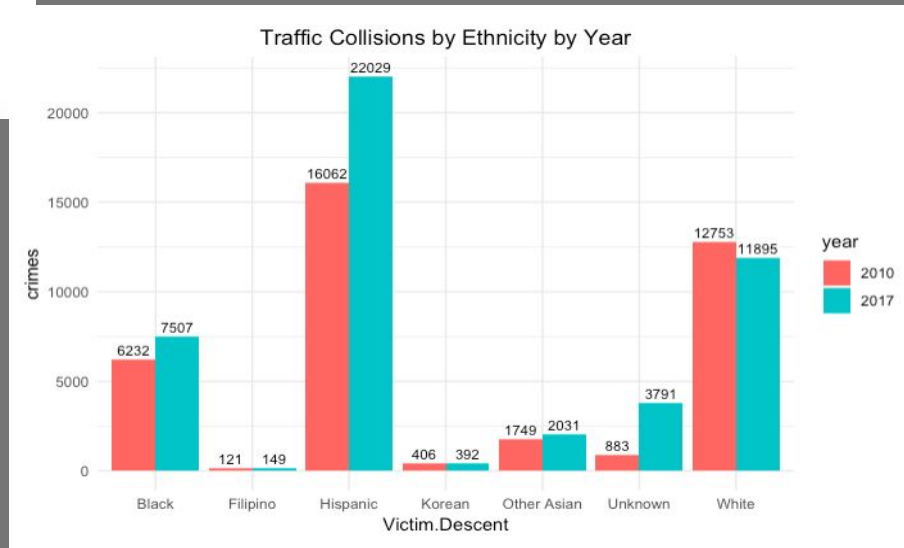


– A Closer Look at Areas and Ethnicity



→ All areas have demonstrated an increase; however, 77th Street, Newton, and Southeast area illustrate the highest change

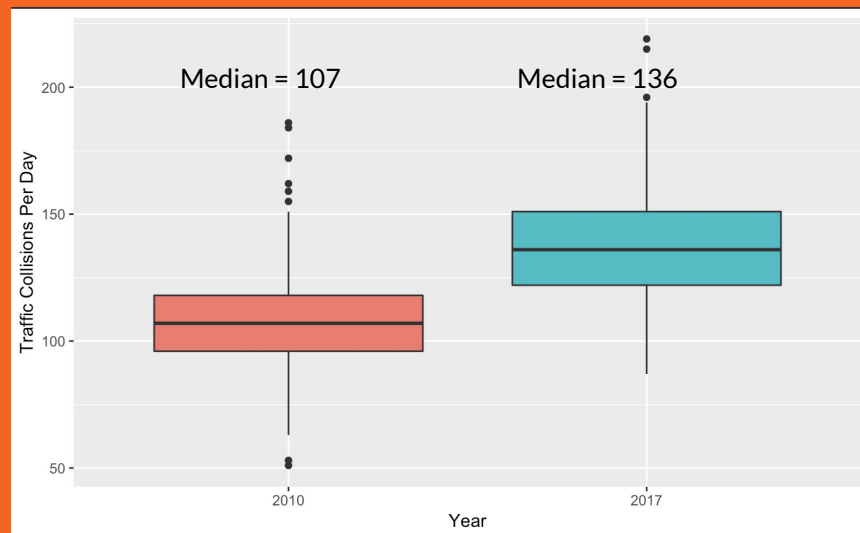
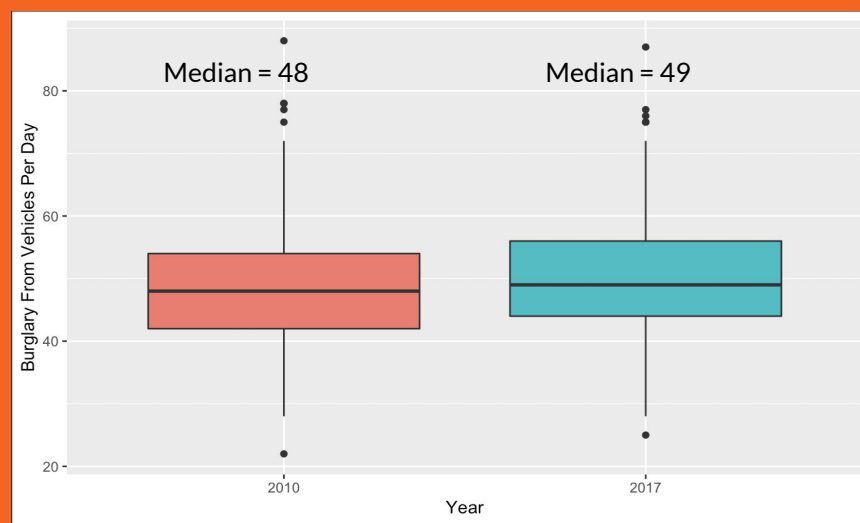
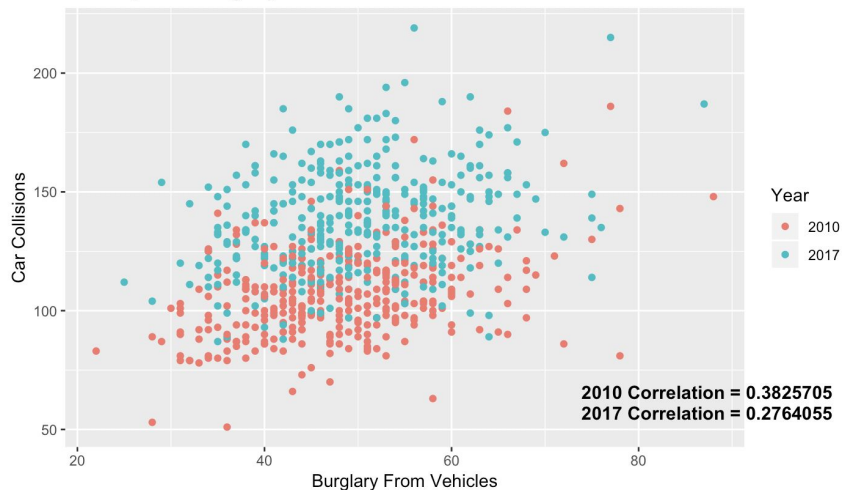
→ Almost every major ethnic group (Black, Hispanic, Other Asian) has experienced an increase in traffic collisions except those of white descent.



Comparison Between the Two Datasets

- Slight increase for Burglary from Vehicles
- Major increase for Traffic Collisions

Scatterplot of Burglary From Vehicles vs. Car Collisions



Comparison Between the Two

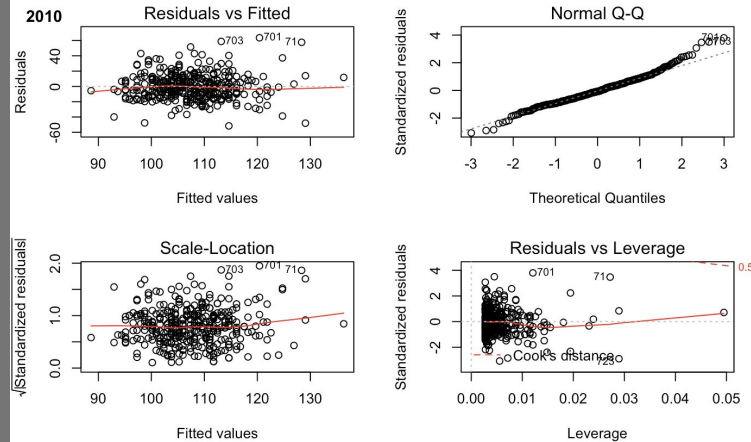
- Burglary is significant for both years
- Plots of both model closely fit model assumptions

```
Call:
lm(formula = TrafficCollision ~ CrimeCommitted, data = ctdata2010)

Residuals:
    Min       1Q   Median       3Q      Max
-51.629 -10.907  -1.294   9.817  63.592

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  72.73596    4.50291  16.153 < 2e-16 ***
CrimeCommitted  0.72230    0.09156   7.889 3.62e-14 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 16.84 on 363 degrees of freedom
Multiple R-squared:  0.1464,    Adjusted R-squared:  0.144
F-statistic: 62.24 on 1 and 363 DF,  p-value: 3.619e-14
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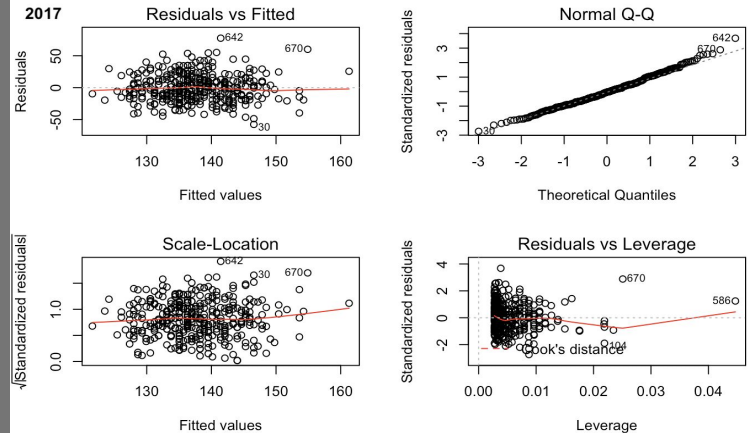


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Call:
lm(formula = TrafficCollision ~ CrimeCommitted, data = ctdata2017)

Residuals:
    Min       1Q   Median       3Q      Max
-57.57 -14.45  -0.64  12.52  77.55

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  105.5906    5.9436  17.77 < 2e-16 ***
CrimeCommitted  0.6403    0.1168   5.48 7.98e-08 ***
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 21.12 on 363 degrees of freedom
Multiple R-squared:  0.0764,    Adjusted R-squared:  0.07386
F-statistic: 30.03 on 1 and 363 DF,  p-value: 7.982e-08
```



Conclusion

- Holding all factors constant, both burglaries from vehicles and car collisions have increased since 2010
- For future explorations, we would like to analyze other factors that may have impacted our findings, including but not limited to:
 - ◆ Declining Prison Populations
 - ◆ Distracted Driving Ordinances
 - ◆ Implementation of Advanced Car Features

