



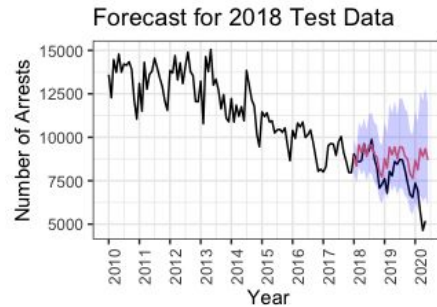
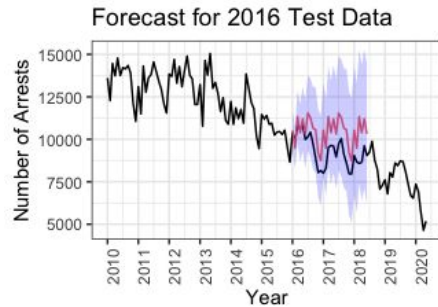
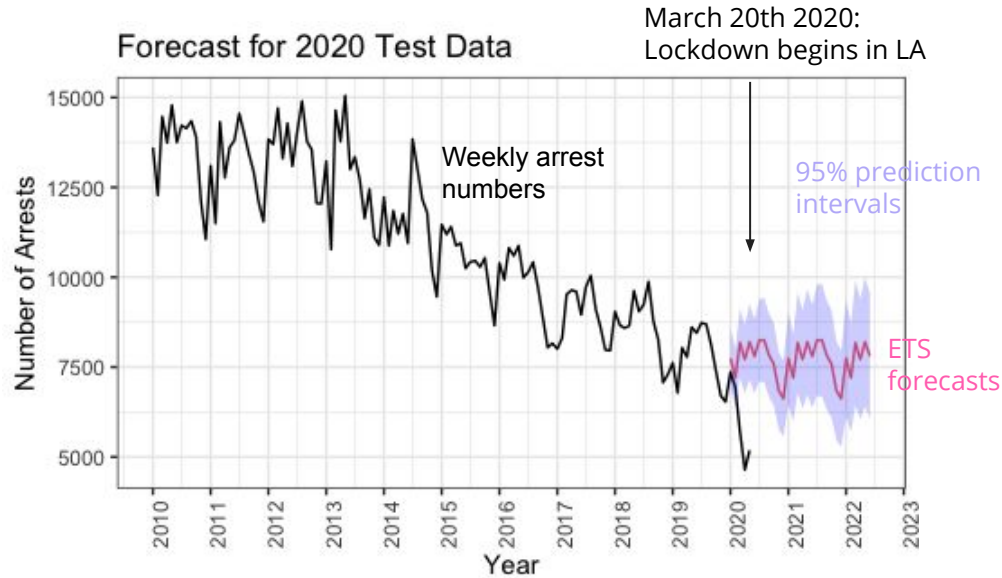
DATAFEST 2020:

Los Angeles Crime Analysis During the COVID-19 Pandemic

ASV Team (Amy, Sherry, and Vicky)



Overall Trend of Arrest

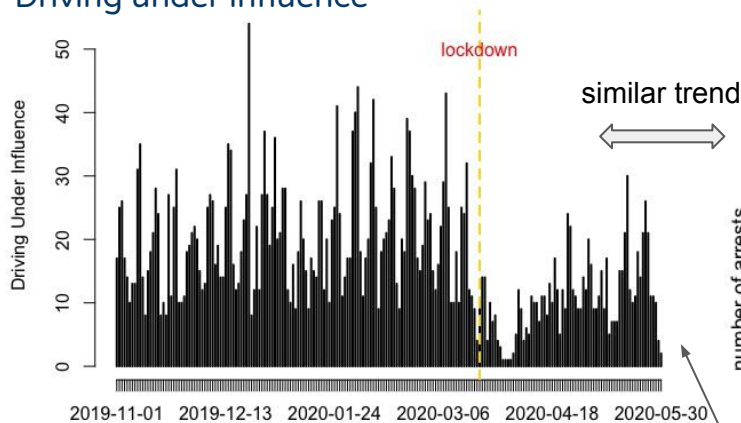


- Weekly arrest numbers that typically following a seasonal pattern show a record low at the beginning of the lockdown.
- Each model was able to forecast arrest numbers within their 95% prediction intervals for the following year, with the exception of the model used to forecast 2020 arrest counts (left).
- The cyclical pattern for arrests is broken in line with the timing of the pandemic reaching Los Angeles.

Test data year	Theil's U
2016	$0.74 < 1$
2017	$0.95 < 1$
2018	$1.07 > 1$
2019	$0.82 < 1$
2020	$3.18 \gg 1$

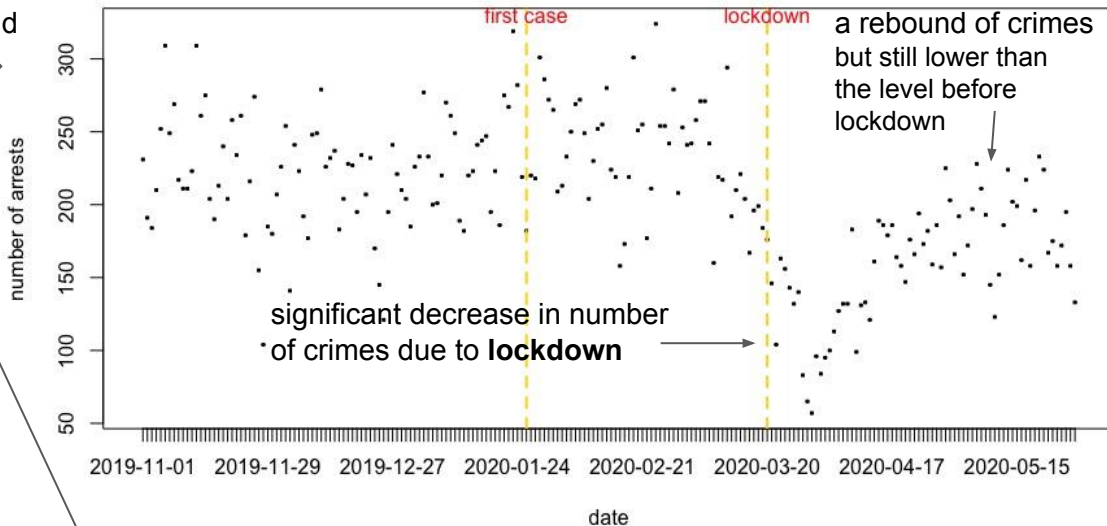
A Closer Look - Nov 2019 to May 2020

Driving under influence



Crimes overall

LA county arrests since Nov 2019



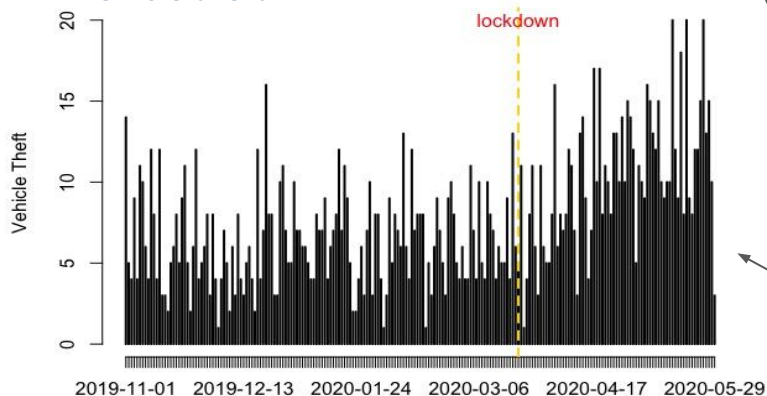
Looking at specific types of crimes:

domestic violence, homicide, rape, and robbery - no significant change

driving under influence, use of narcotic drugs, and drunkenness related crimes - same trend as the overall crime rate trend

vehicle theft and burglary - no change soon after the lockdown, increased significantly only after two weeks since the lockdown

Vehicle theft



Conclusion & Future Work

What we found:

- Security measure - lockdown is a significant in decreasing arrest numbers but only for a short period of time
- Some types of arrests were affected, but not all.

How should police react if a second wave or another pandemic occurs?

- Distribute the police force wisely under the similar case:
 - Increase police force for preventing theft (ex. vehicle theft and burglary)
 - Decrease police force for drug crime and drunkenness
 - Maintain police force for violence involved cases (ex. homicide, rape)

