

A dramatic silhouette photograph of two figures standing in a field at sunset or sunrise. One figure is facing away from the camera, holding a long rifle. The other figure is partially visible behind them. The scene is bathed in a warm, golden light from the low sun, which creates a bright lens flare and illuminates the tops of their heads and shoulders.

# Opportunity for Criminals? COVID-19 Pandemic

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# Introduction



Criminals have been taking advantage of vulnerabilities due to COVID-19.

How are **COVID-19** and **crimes** related?

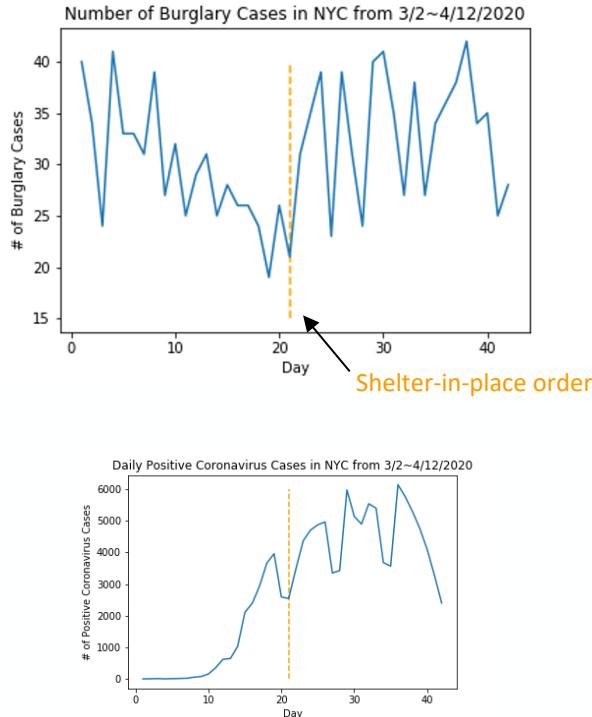
We focus on **burglary** and **robbery**.

(Source: Twitter)

Our analysis is based on data from the following sources:

- NYCHealth (COVID-19 Cases in NYC from March 2nd to April 12th 2020)
- SpotCrime (Burglary and Robbery cases in NYC from March 2nd to April 12th for years 2018 to 2020)

# Burglary vs Coronavirus



**Obvious difference before and after the shelter-in-place order**

## Hypothesis

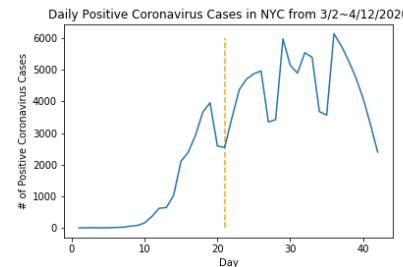
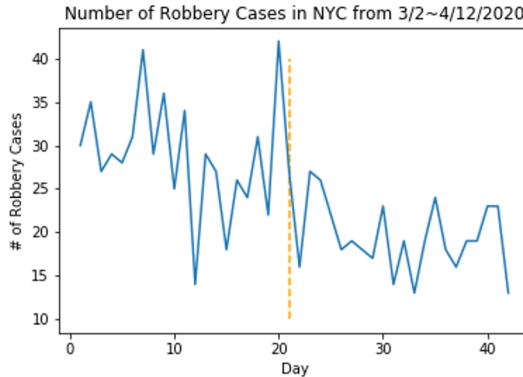
1. Before the order, burglars were not able to find a good target due to uncertainty in location of people
2. After the order, with people at home and closed businesses, businesses became an easy target

## Correlation

vs COVID-19 Cases before order	vs COVID-19 Cases after order	vs COVID-19 Cases throughout
-0.62	0.58	0.20

(First two correlations are statistically significant at significance level 0.01)

# Robbery vs Coronavirus



Obvious difference before and after the shelter-in-place order

## Hypothesis

1. Before the order, robberies occurred regardless of uncertainty in where people were due to nature of crime
2. After the order, robbers did not need to use force to commit robbery since they can target empty businesses

## Correlation

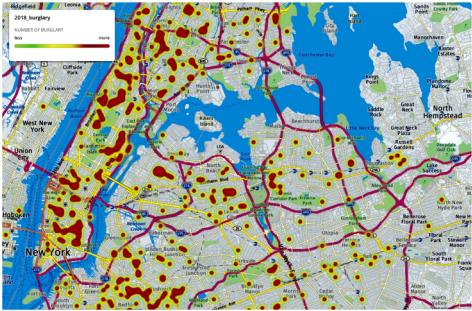
vs COVID-19 Cases before order	vs COVID-19 Cases after order	vs COVID-19 Cases throughout
-0.33	-0.13	-0.62

(Last correlation is statistically significant at significance level 0.01)

# Crime Heatmaps

## Burglary

2018



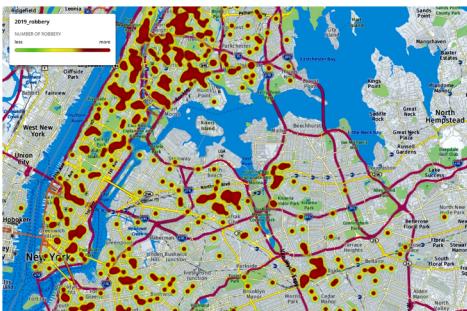
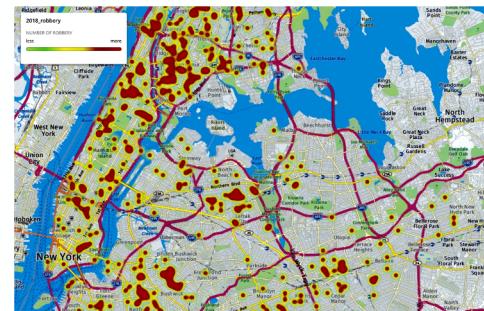
2019



2020



## Robbery



(Heatmap uses data from March 2nd to April 12th for all years)

# Summary

- Shelter-in-place order makes burglaries easier and criminals are shifting strategies during pandemic.
- Empty properties near Midtown Manhattan can be vulnerable to burglaries.
- The pandemic may be an opportunity for criminals, but it is also an opportunity for us to serve good for the society.
- Stay safe and well!