

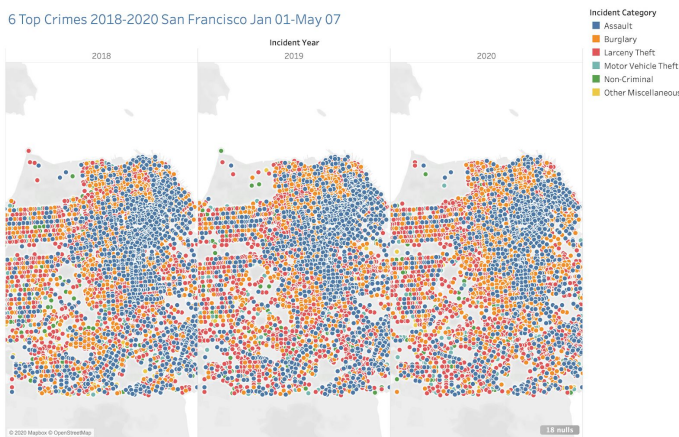
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How has the COVID-19 pandemic affected crime rates & types, using San Francisco as a case study?

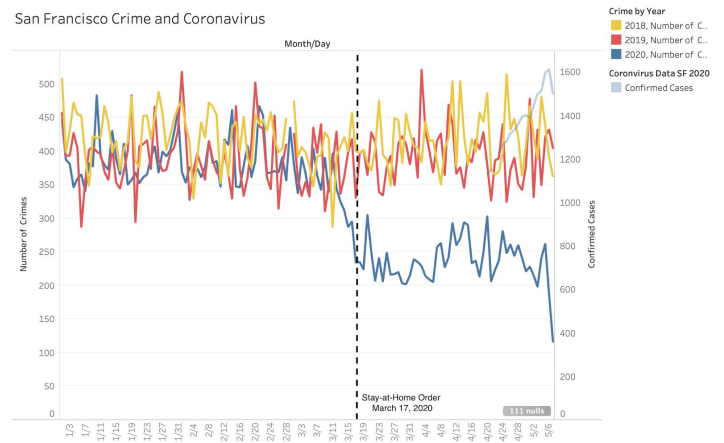
The ongoing COVID-19 pandemic has spurred governments around the world to institute varying degrees of lockdown measures aimed at curbing the spread of the disease. The San Francisco Bay Area was among the first metropolitan areas in the United States to issue a stay-at-home order on March 17, 2020.

Under these circumstances, we sought to examine the effect the stay-at-home orders had on crime rates across the city of San Francisco, CA. Using publicly available data on individual crime records between Jan 1 and May 7 for the years 2018, 2019 and 2020, we plotted incidences of crime on a map of the city using the included location data. We also observed more specific trends in different categories of crime, as well as how the stay-at-home orders may have affected 2020's data.

6 Top Crimes 2018-2020 San Francisco Jan 01-May 07



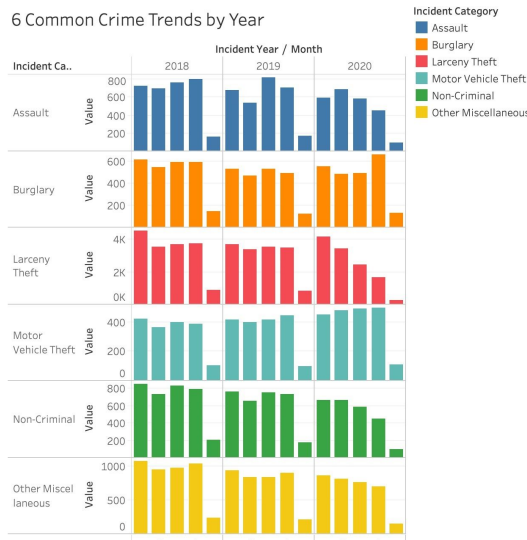
San Francisco Crime and Coronavirus



We immediately notice that the 2020 plot depicts a different spatial distribution of crimes across the city, with more orange (burglaries) in areas that were formerly blue (assaults). Additionally, the overall rate of crime has decreased considerably, as clearly visible in the line graph. This is consistent with the hypothesis that the stay-at-home orders would have reduced the frequency of crime in the city.

However, with high-level visualizations such as these, it is not immediately clear how different types of crimes are affected, nor the extent to which they are. To plot this, we categorized the crimes and plotted them on a monthly basis for the three years in our dataset, hypothesizing that 'contact' crimes would have reduced considerably.

6 Common Crime Trends by Year



We notice that assault and larceny, 'contact' crimes, have decreased in 2020 relative to previous years. This is the case with non-criminal reports (such as tips) and other miscellaneous crimes as well (such as DUIs). Curiously, however, motor vehicle thefts and burglaries have stayed constant year-on-year, and have risen since the start of 2020. This might suggest that people find it less 'risky' to rob a business or steal an unattended car when there are fewer people (i.e. witnesses) on the street. In tough economic periods like this, these effects might be exacerbated.