

Analysis of COVID in California

July -2020 to July- 2021

Questions to answer

What was the total case rate and death rate for the state of California?

Which counties were most affected by COVID?

Which counties were least affected by COVID?

Is there correlation between number of covid cases and population/area of the county?

When did COVID peak in California within the timeframe?



The Data Used

The data set has cumulative data for each county in the United States.

Shortened the dataset to focus on California's 58 counties from July 1st, 2020 through June 30, 2021.



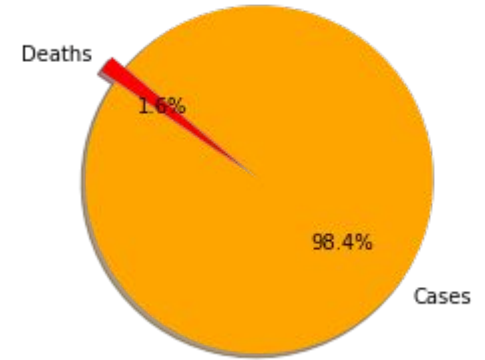
State Analysis

Date Range: July 1st, 2020 through June 30, 2021

Total Number of Cases in State of California : 3580246

Total Number of Deaths in State of California : 58030

Ratio of Total Number Deaths to Total Number of Cases
is shown through a pie chart.

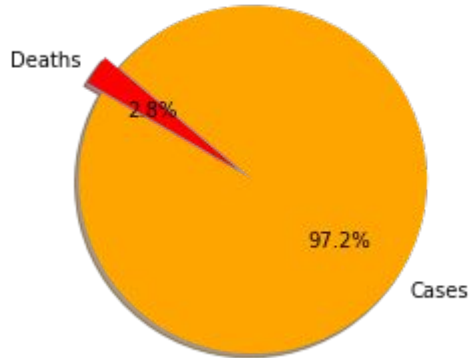


County Death Rate

County with Max Death Rate : Imperial County with 2.8%,

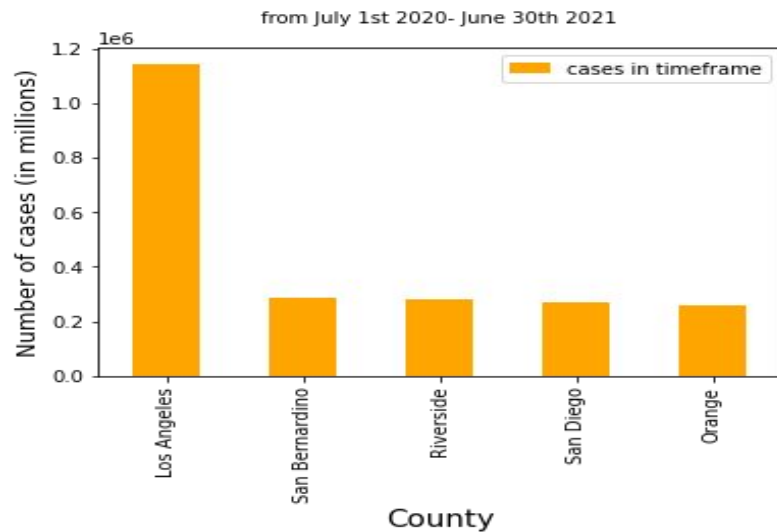
County with Min Death Rate: Alpine and Sierra County with 0.0%

Imperial County

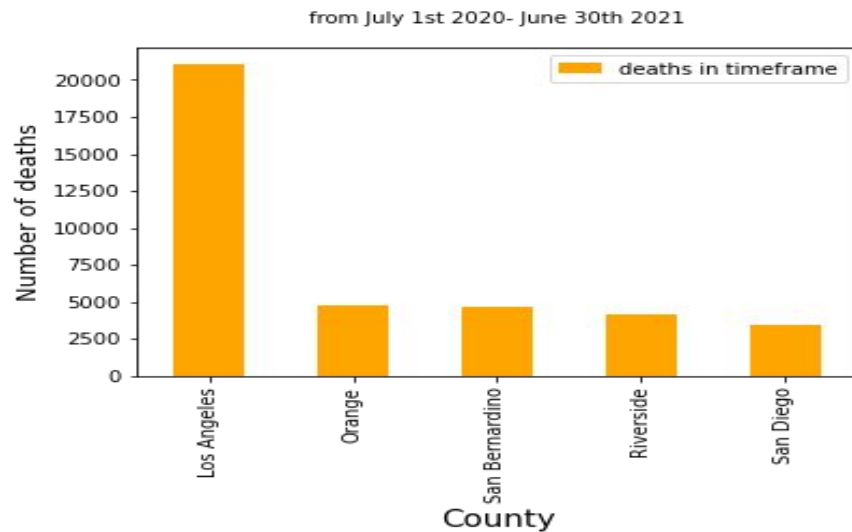


Most Affected Counties

Top 5 Counties in California (# cases)



Top 5 Counties in California (# deaths)

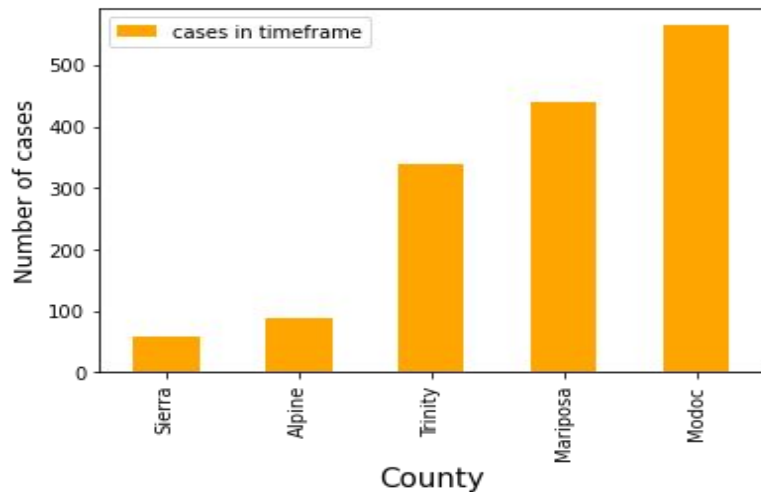


All Southern California

Least Affected Counties

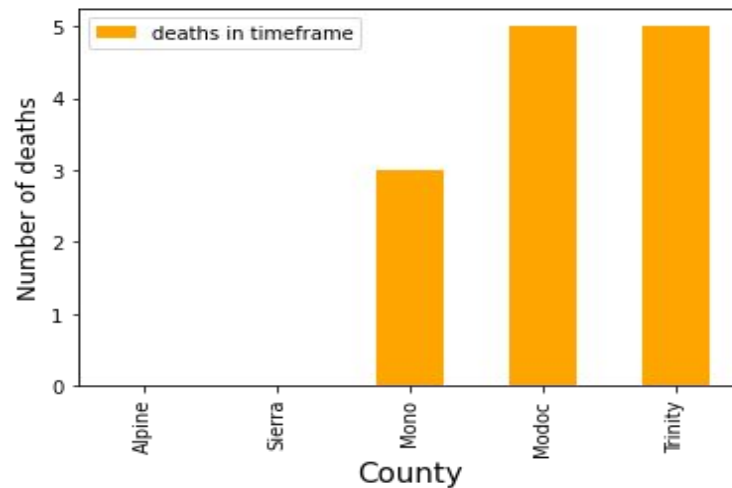
Bottom 5 Counties in California (# cases)

from July 1st 2020- June 30th 2021



Bottom 5 Counties in California (# deaths)

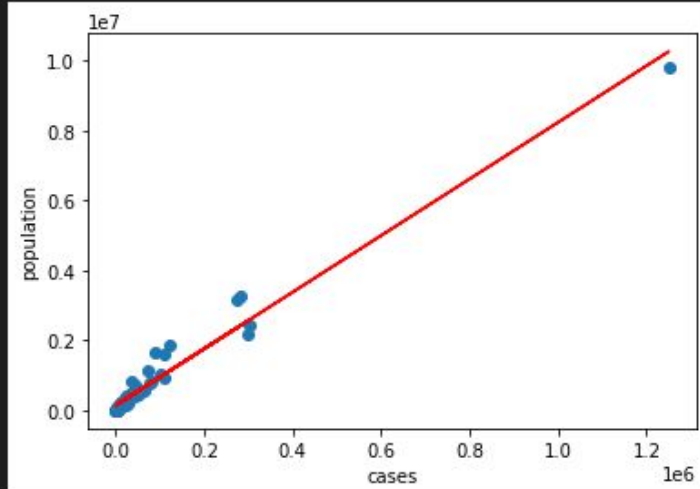
from July 1st 2020- June 30th 2021



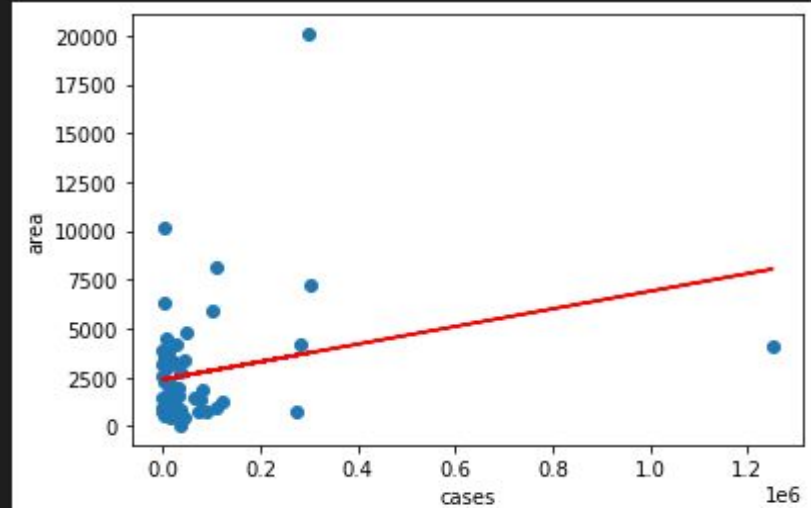
All of the least affect

Correlation Analysis (# Covid Cases vs County Population/County Area)

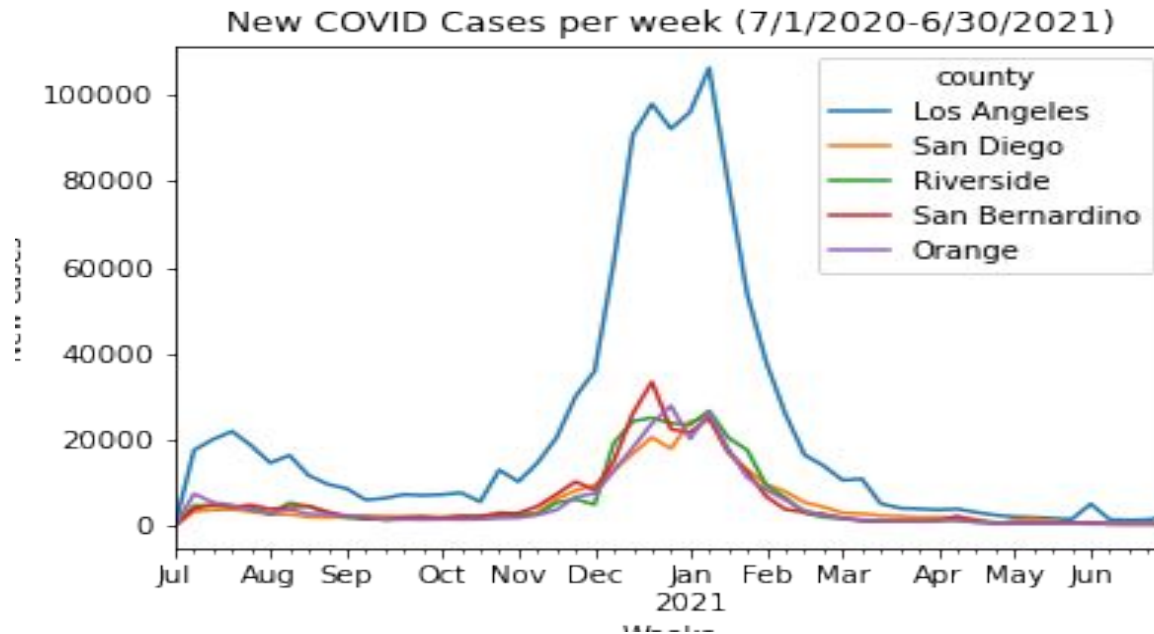
The correlation between cases and population is 0.98



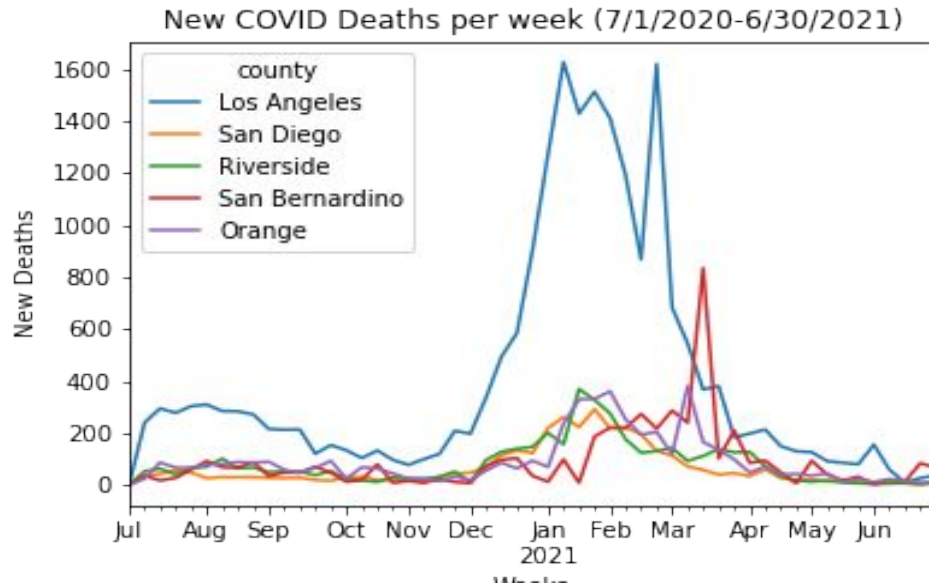
The correlation between cases and area is 0.25



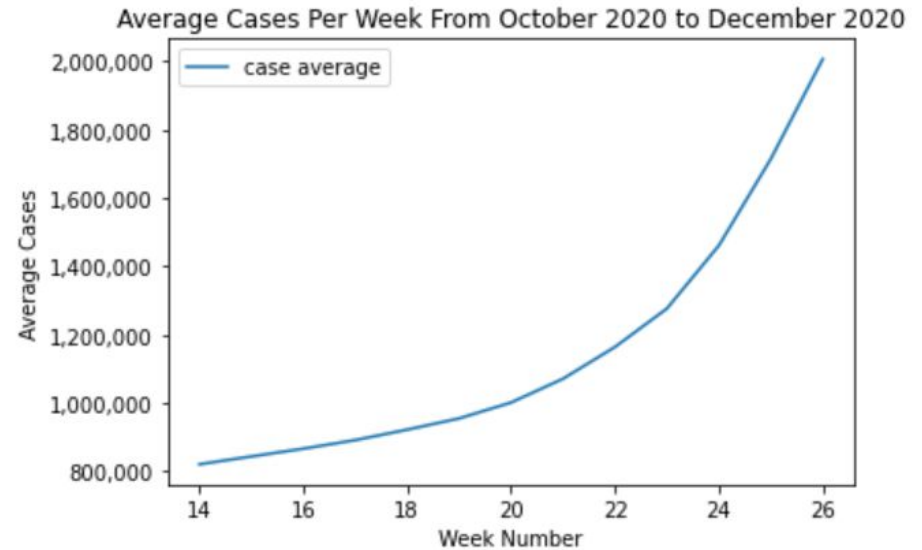
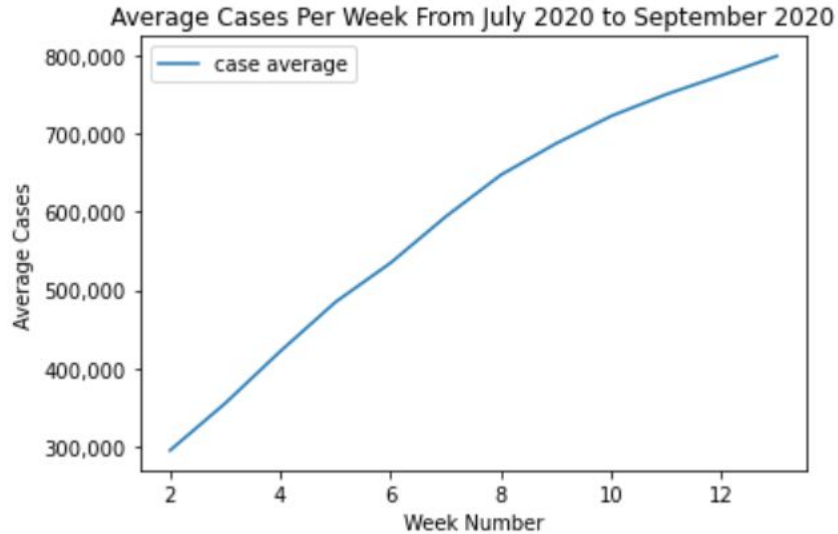
Weekly COVID Analysis - New Cases



Weekly COVID Analysis - New Deaths

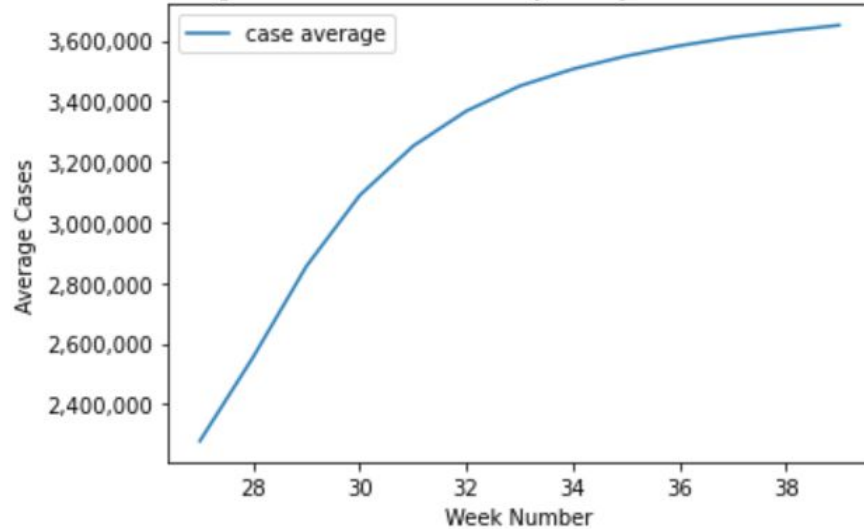


Average Cases Per Week July 2020 to December 2020

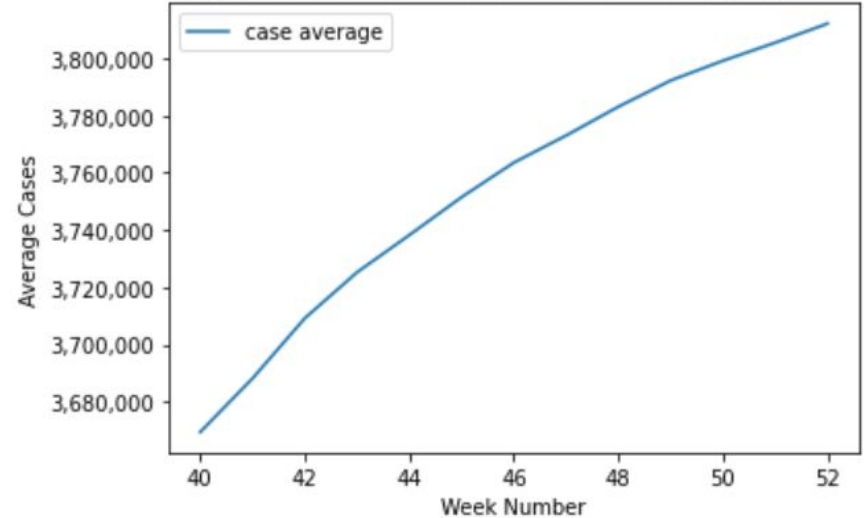


Average Cases Per Week January 2021 to June 2021

Average Cases Per Week From January 2021 to March 2021

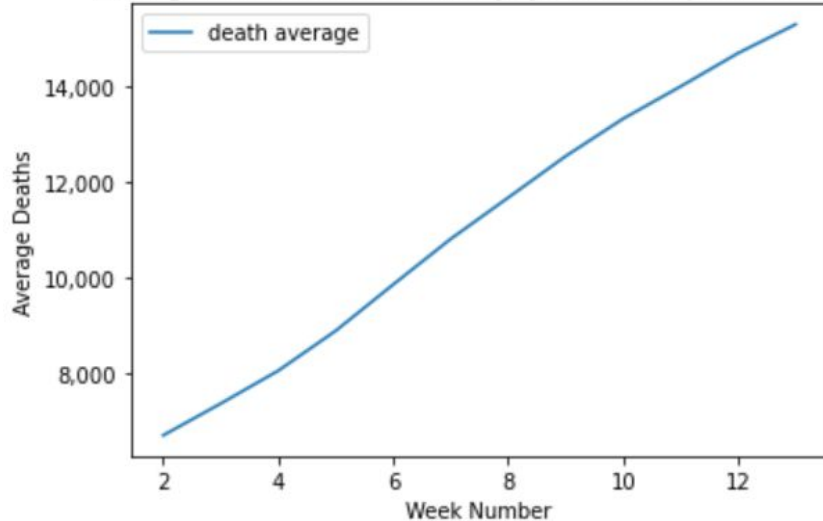


Average Cases Per Week From April 2021 to June 2021

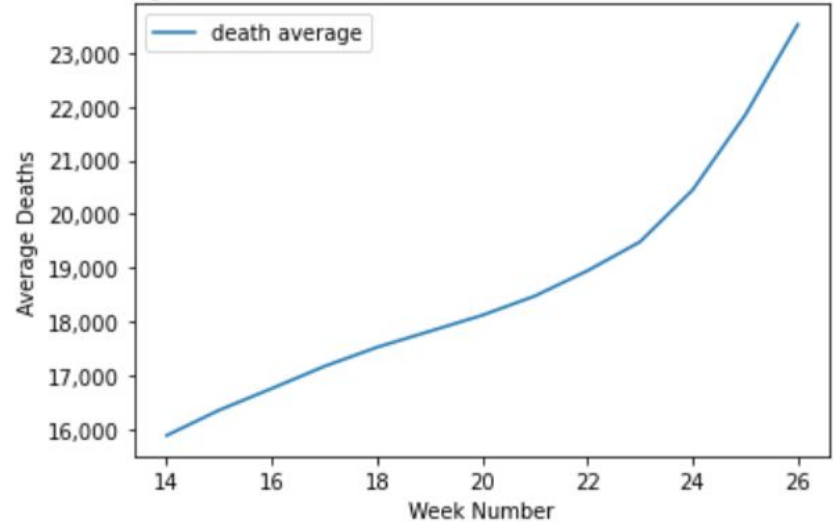


Average Deaths Per Week July 2020 to December 2020

Average Deaths Per Week From July 2020 to September 2020

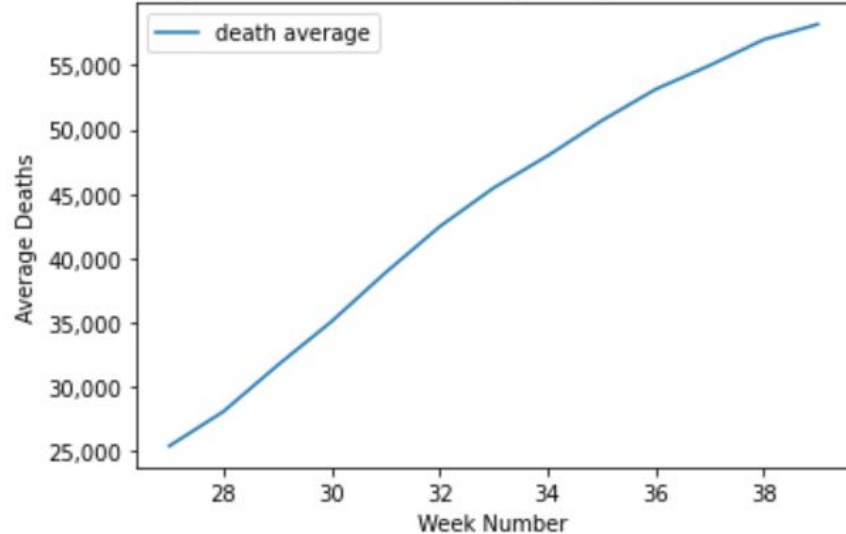


Average Deaths Per Week From October 2020 to December 2020

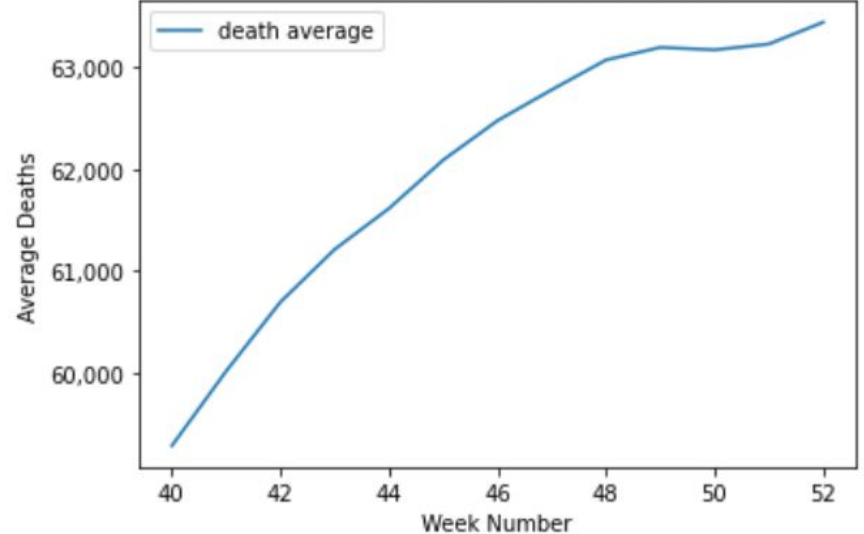


Average Deaths Per Week January 2021 to June 2021

Average Deaths Per Week From January 2021 to March 2021

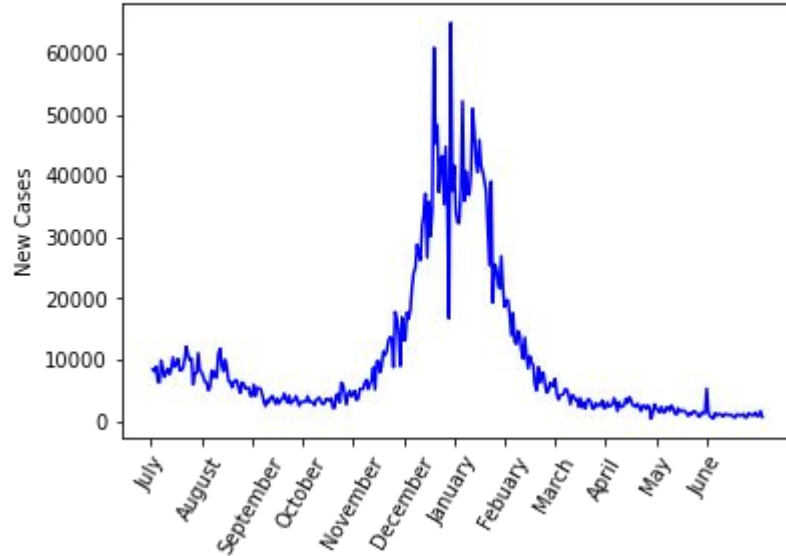


Average Deaths Per Week From April 2021 to June 2021



Daily California Case Count

New Daily Cases

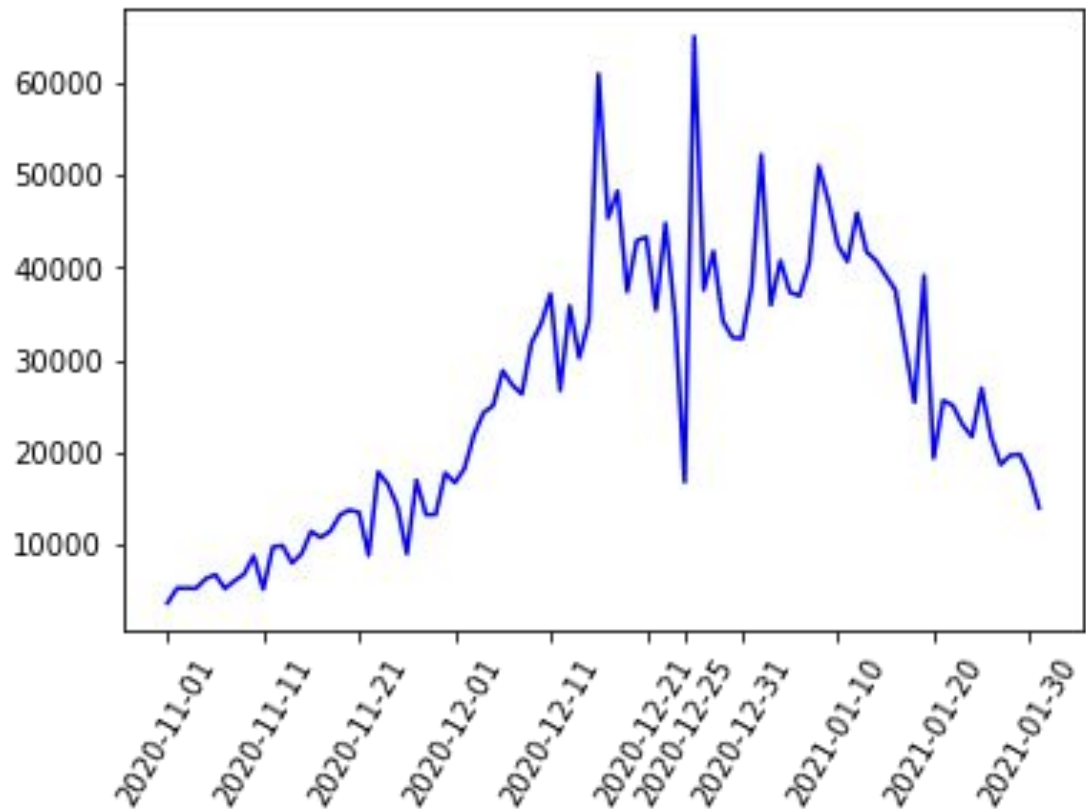


The drop in the holiday season is December 25th and the highest spike is December 26th.

December 26th case count=64,986

In healthcare, this is considered a False Decrease.

Holiday Daily Cases



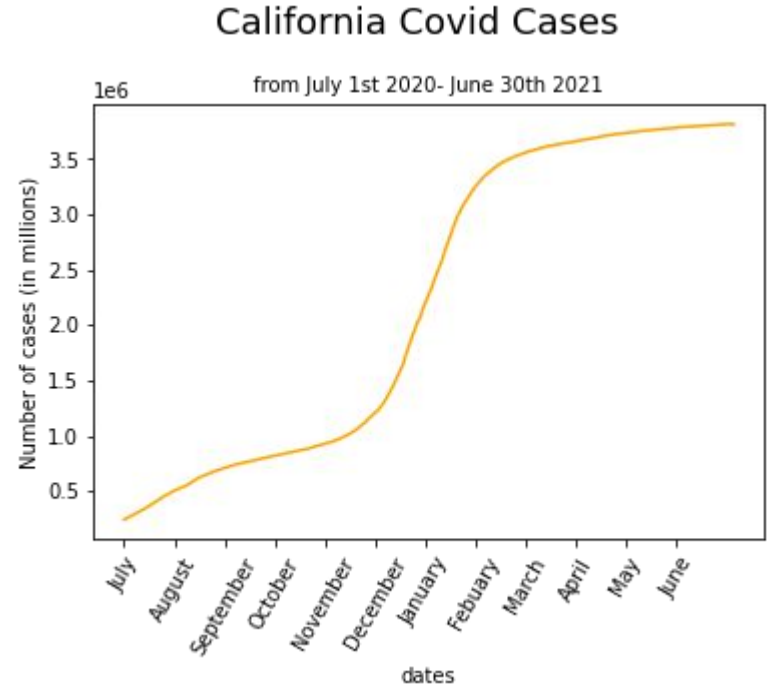
Vaccines were yet to be widespread.

Timeline of Covid Cases

The number of cases steepened dramatically during the holidays

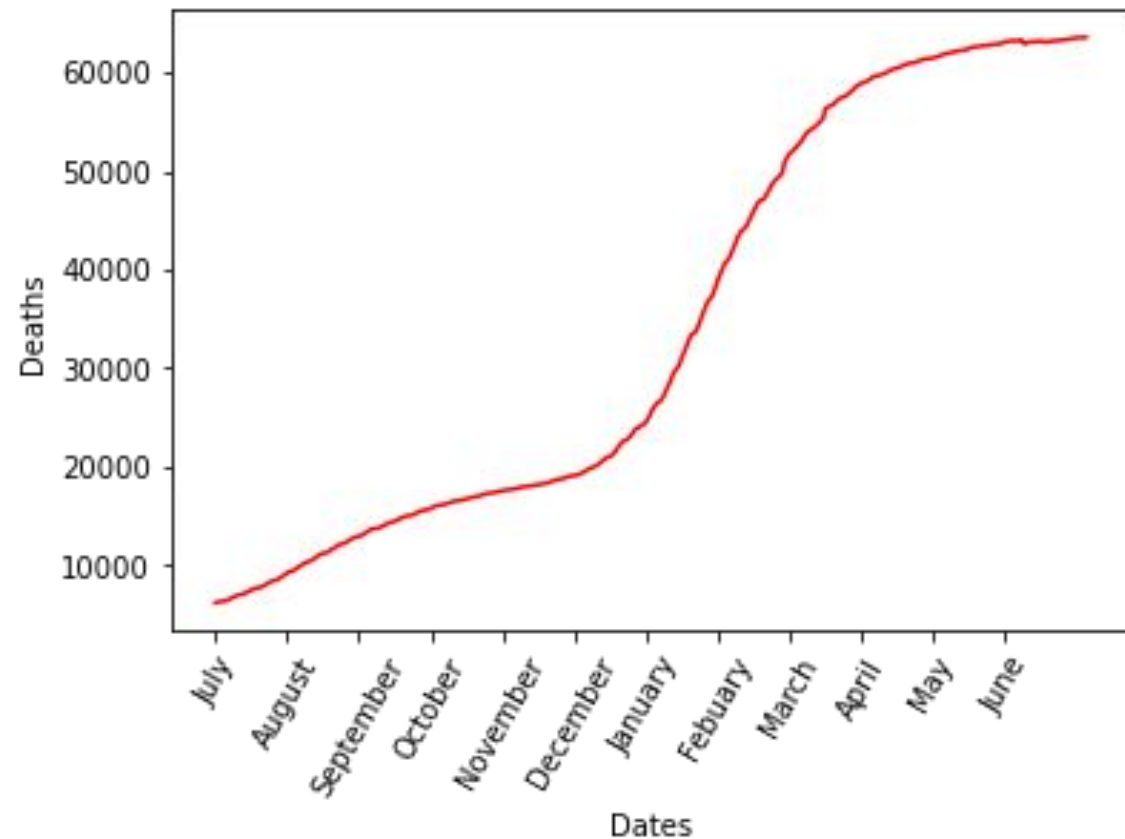
California Lockdown reinstated conditionally on December 3, 2020 and renewed indefinitely December 29, 2020

By May 28th, 2021, 20 million Californians have been partially vaccinated

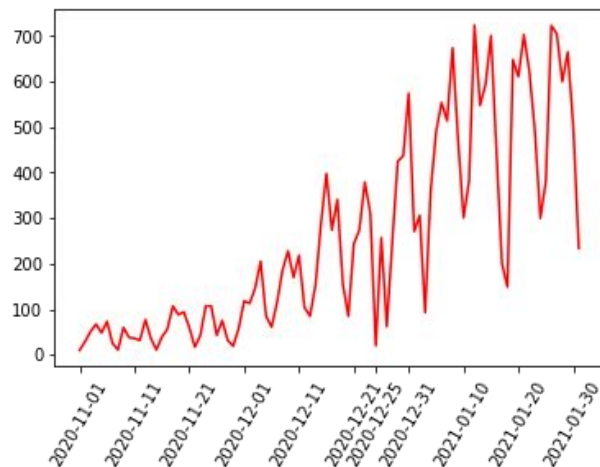


California Covid Deaths

from July 1st 2020- June 30th 2021



Holiday Daily Deaths



Reference

Dataset:

<https://www.kaggle.com/datasets/fireballbyedimyrnmom/us-counties-covid-19-dataset>

Cal Matters:

<https://calmatters.org/health/coronavirus/2021/03/timeline-california-pandemic-year-key-points/>

California Counties estimated population (July 2021)

<https://dof.ca.gov/forecasting/demographics/estimates-e1/>

California Counties areas (sq mil)

<https://www.counties.org/pod/square-mileage-county>

