

Introduction :

Since the beginning of the COVID-19 crisis, US has had to face facts and make hard decisions. Defeating COVID-19 will require collaboration between state government, local governments, research universities, technologists, citizen scientists, and other members of the public. There are occupations that require traveling through the whole states or in the counties itself in which having the updated information about the counties and states with the number of the cases and the death rate with the location might be really helpful to take certain precautions and at the same time conduct the job that is helpful to maintain the economic growth in pandemic.

Furthermore, generally it is beneficial to take care of the health and the food habit during COVID-19 and have information about the food habits of people who have been affected by the virus and those that have been passed away because of the COVID-19. These analysis are a good resource for individuals that have weak immune system and can contribute to lessen the confirmed cases by changing their food habits.

This report is mainly for people who are living in California with different counties and the COVID-19 cases with diet relation are essential for people all around the world.

Data :

The data for this analysis has been collected from WHO and COVID19.CA.GOV which are downloadable. These data include the food products such as meat, vegetable and oils with the confirmed cases for all the countries around the world. The data that has been downloaded from COVID19.CA.GOV has data for confirmed and death values for different states with their FIPS locations within different dates.

Methodology:

The methodology that I have used is to first clean the data, reindex them and using different plotting sections to be able to present the data both for the whole US and California Counties in particular.

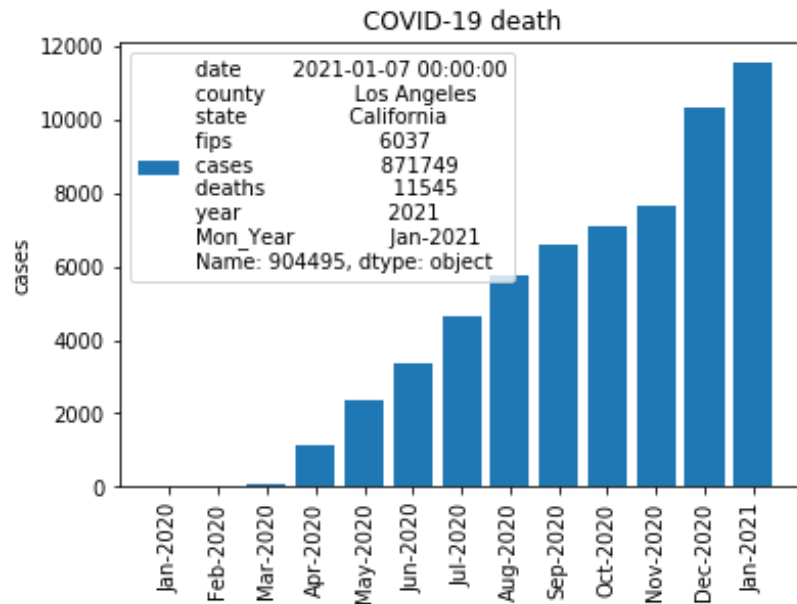


Fig.1 shows the most death cases in the state of CA

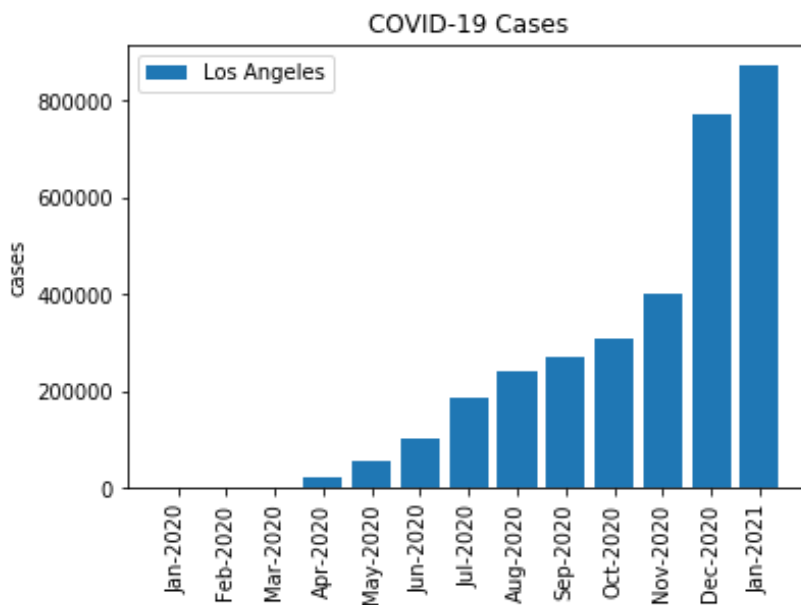


Fig2. shows the most death cases in the state of CA

Fig.1 and Fig.2 shows that the number of the cases and death for the county of LA is more than the other counties that people are traveling to this county should take precautions and avoid the area if the travel is not essential. Since San Francisco is the center for tech people I have also analyzed the confirmed and the death cases so that tech people can be aware of it within a click without searching and putting time on googling it.

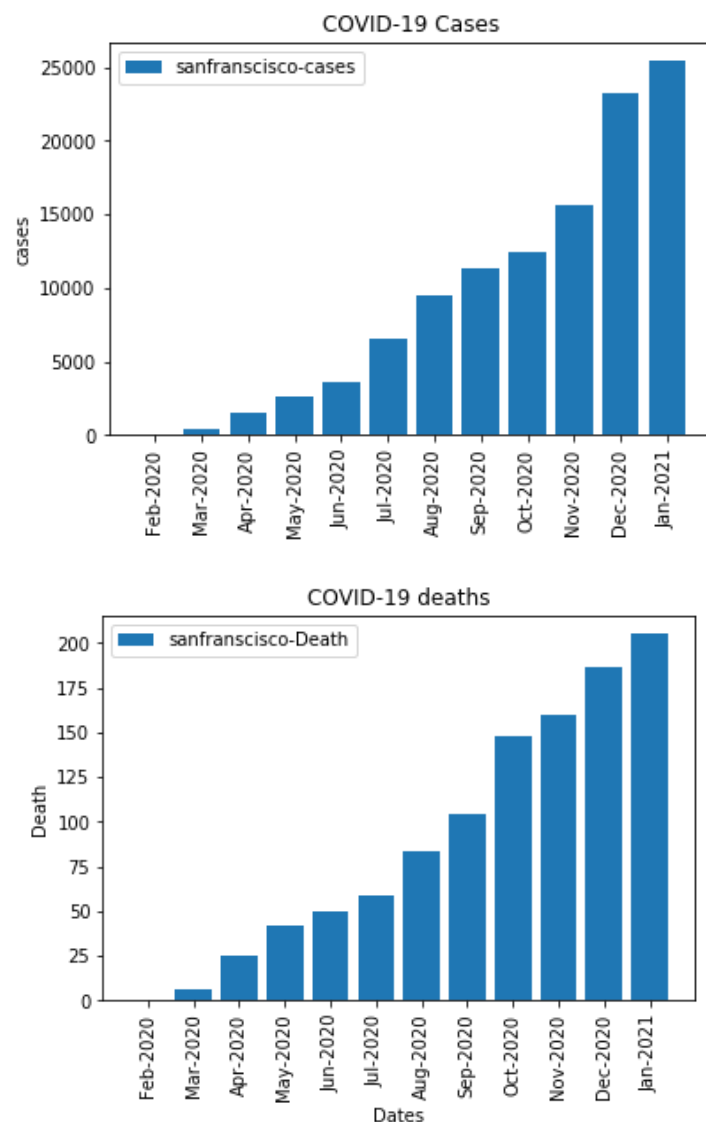
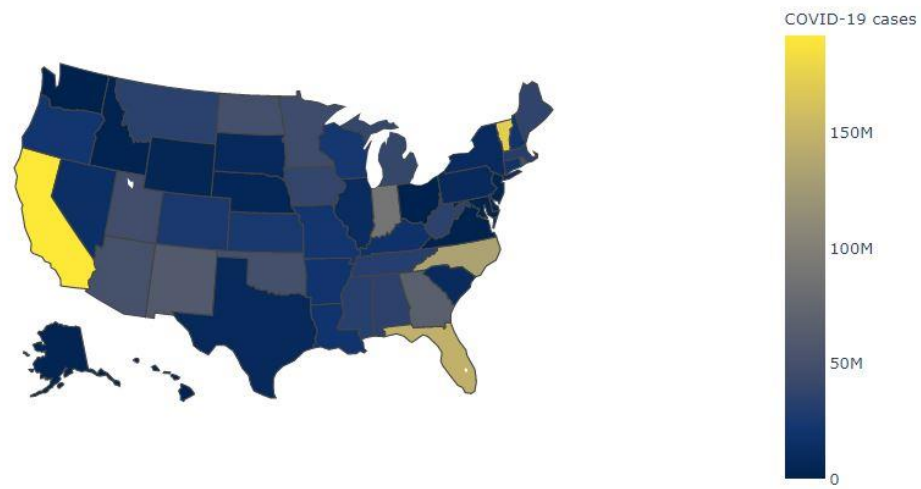


Fig.3 San Francisco confirmed and death cases

COVID-19 cases by state



COVID-19 deaths by state

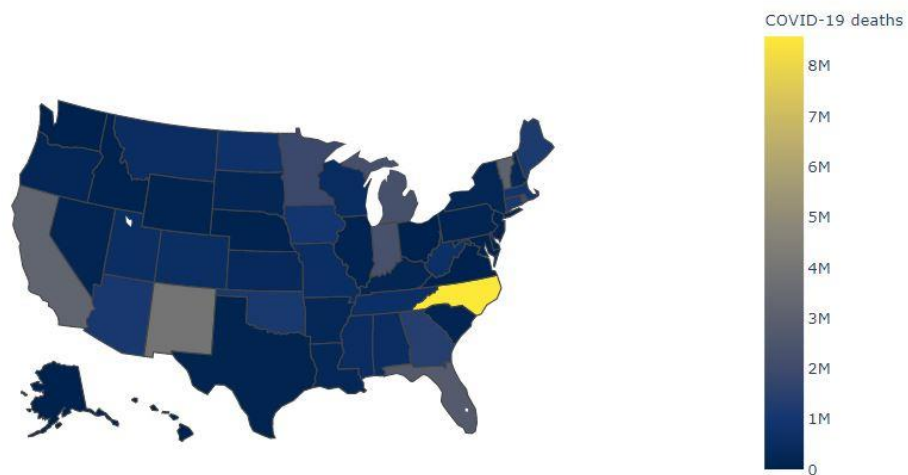


Fig.4 the COVID-19 cases and the death for US

Fig.4 shows that even though the cases in CA are more, the number of the death in NY is a lot more which should be considered that having more COVID-19 cases doesn't necessary means that the number of the death are going to be more. The data are accumulative.

The scatter plot with the death numbers for different counties for CA has been presented in Fig.5. it indicated that the number of death for LA county has been increases since the first case in Jan 2020 has been reported with the increase in the number of the cases that has been shown by the size of the circles.

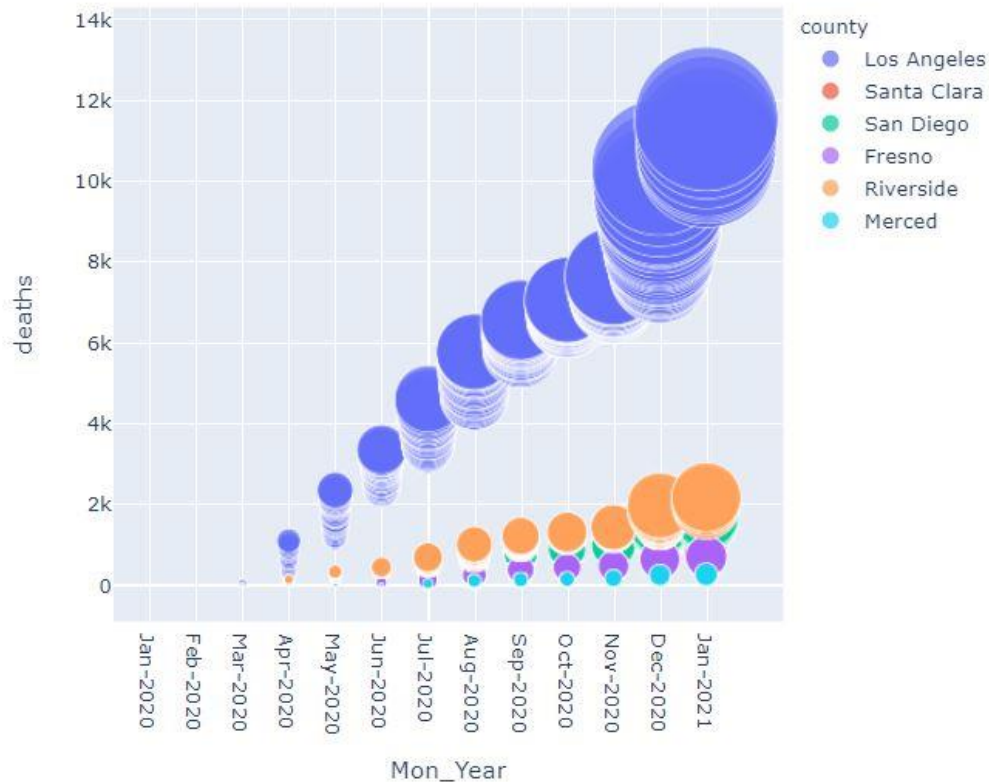


Fig.5 number of the death for different counties for CA with number of cases

Fig.6 shows that the number of death has been significantly increased in Dec 2020 for all the counties and LA has been the top death rates among all. And it keeps going up in the plot as of start of Jan 2021.

DAILY NEW Confirmed cases by country in California

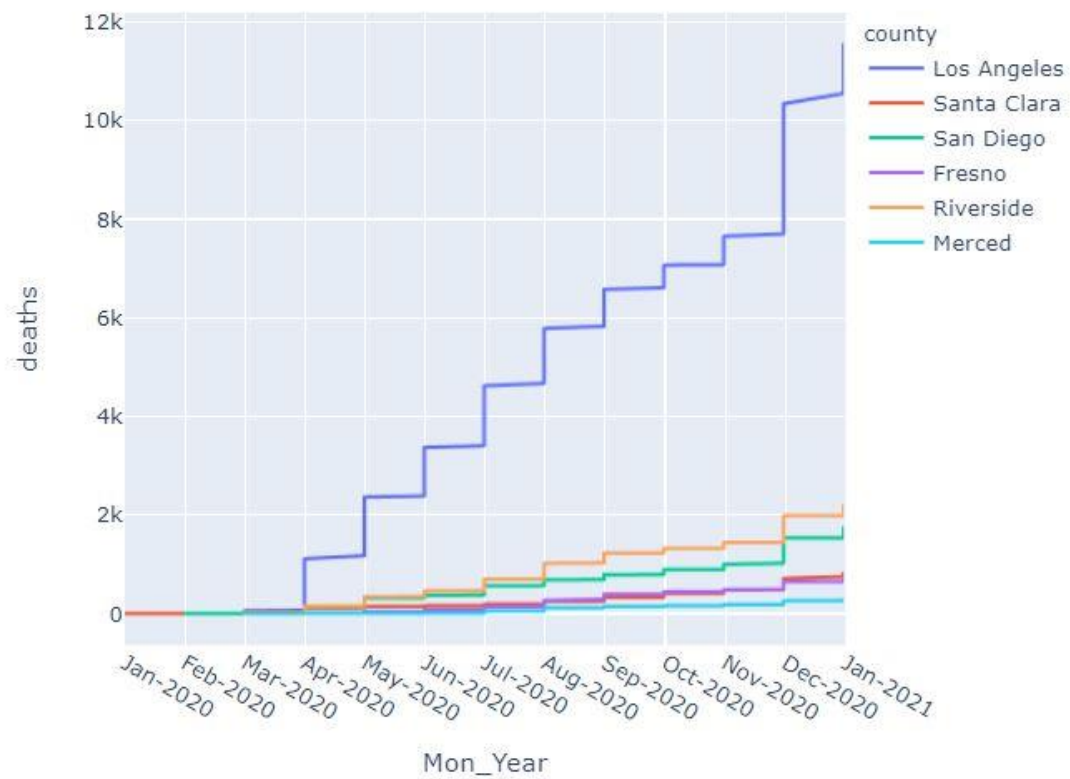


Fig.6 number of the death for different counties for CA

Food Habits VS COVID-19 :

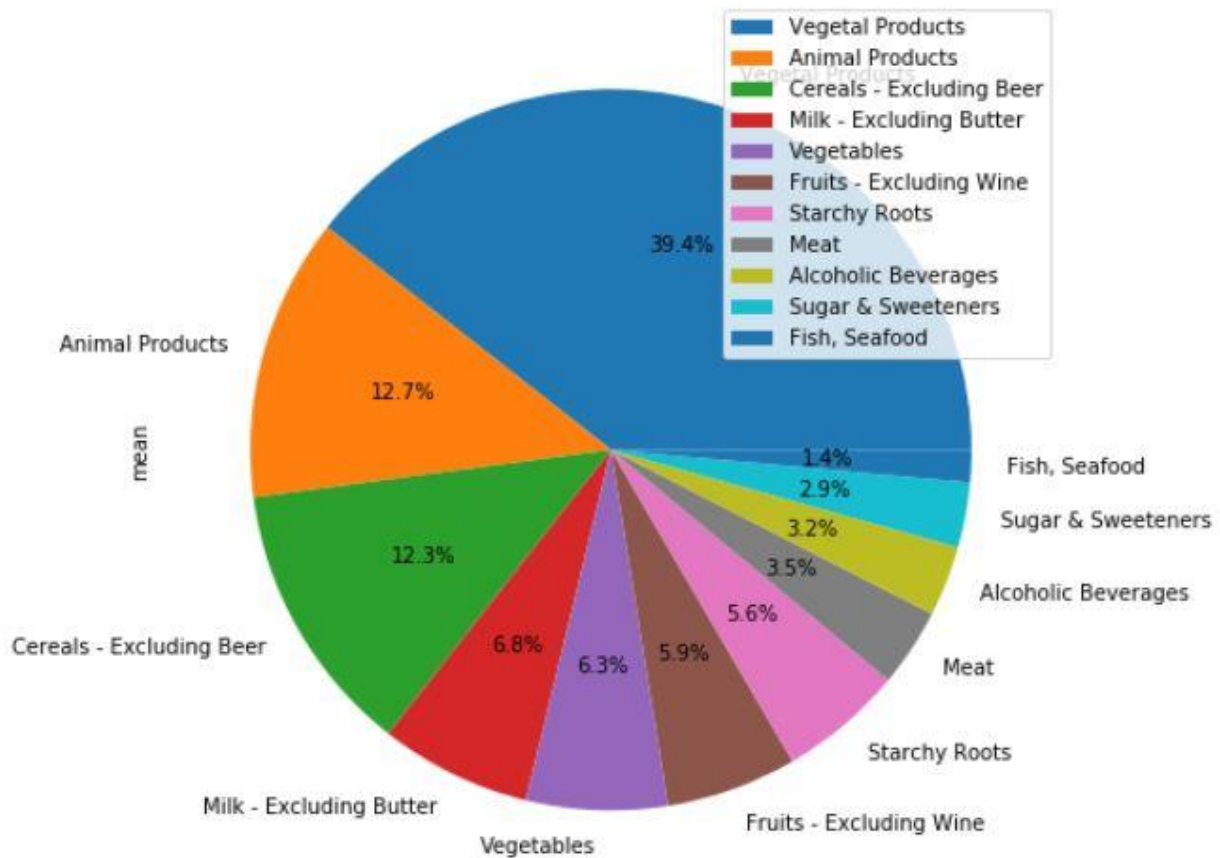


Fig.7 Food habits for all the countries during COVID-19

Fig.7 shows that most of the countries have used vegetable products and then Animal products during COVID-19 since Jan 2020-2021. And Fish and seafood has been the less food supplies that has been consumed.

Using Pearson Correlation with the COVID-19 confirmed and death cases. I have used heatmap to show this relation. The results showed that people with confirmed cases used eggs and animals products and meats in the top list and this results agrees with the diet of people who have died from COVID-19 meaning that eggs and animal products had the highest Pearson correlation coefficient.

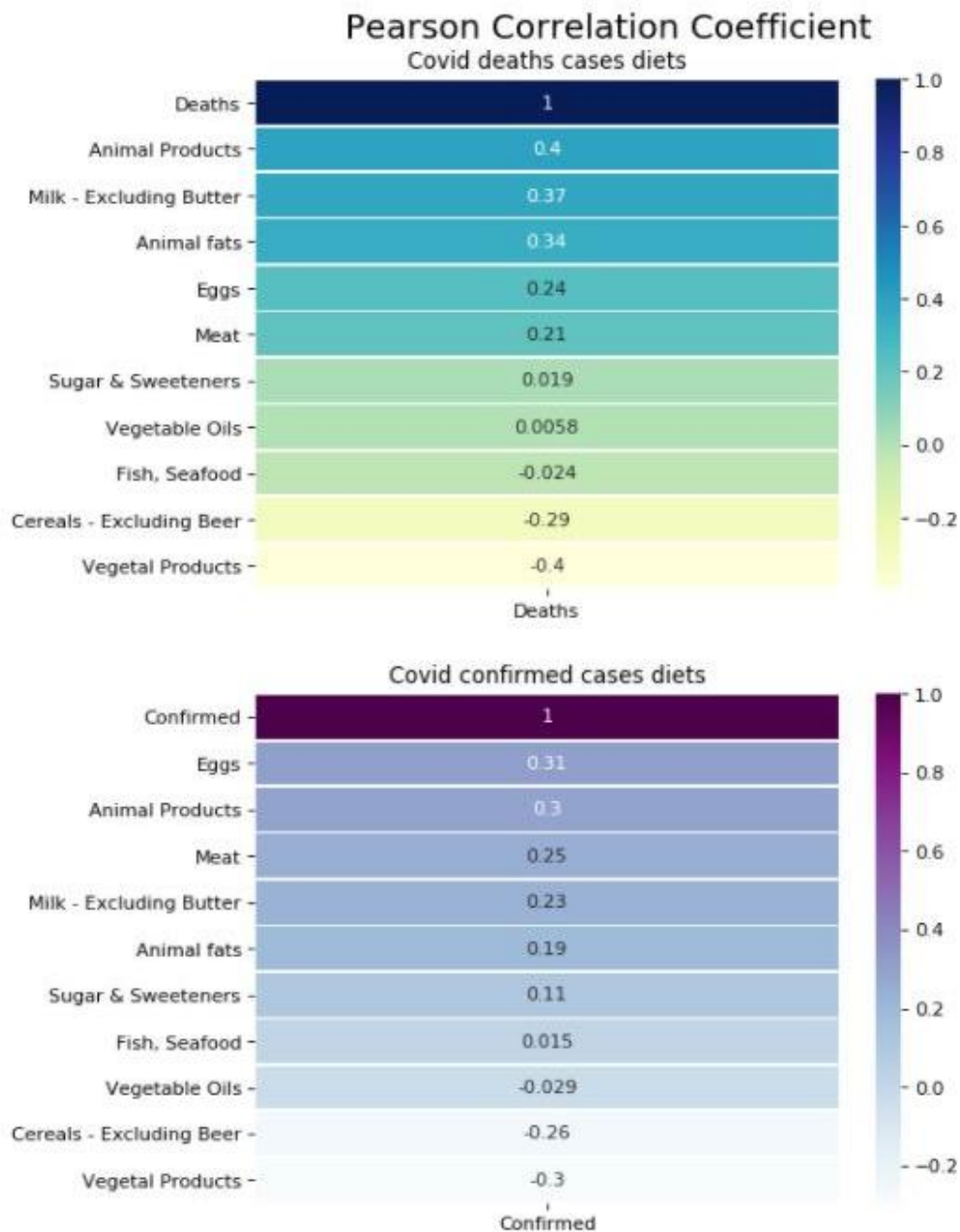


Fig.8 Pearson Coefficient for COVID related diet

Conclusion:

LA have the highest confirmed cases and death cases and it is rising with the time since Jan 2020. However the results of the confirmed cases with death for the whole US shows the opposite results in the sense that the state with the high

confirmed cases didn't have the highest death rates which should be taken into considerations and it needs more data to be able to come into a definitive conclusion within time.

The results for the COVID-19 diet related showed that the confirmed and the death cases had the same diet habit because the Pearson coefficient had the same ratio with the eggs and the animal products in the highest list.

These results are helpful for the elderly and the health organizations to do more research on the effect of food habits of the susceptibility to the covid-19.