MEMBER TASK

Lahari Chilakuri, Graduate Student

Generate weekly statistics:

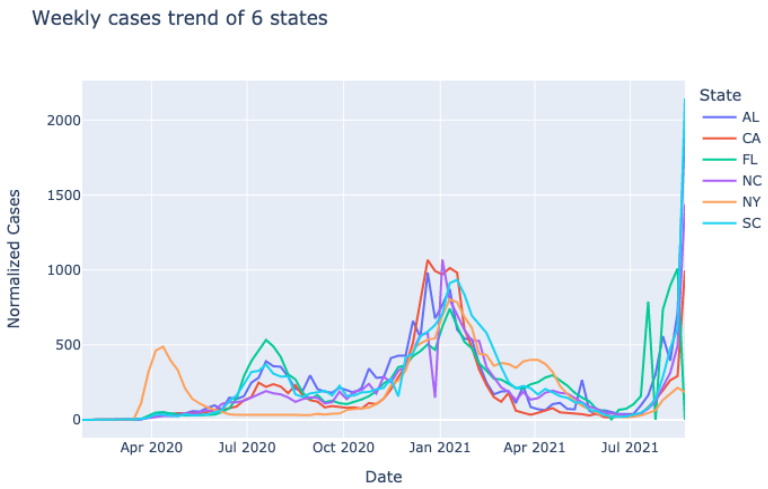
In the task-1 of the member task, I have chosen the California (CA) state and analyze its weekly statistics regarding the number of new cases and death reported on the week-to-week basis.
The mean, median and mode of the number of cases and deaths per week in the California state have been calculated.

The mean, median and mode for the number of cases per week are
mean 127.506024
median 56.000000
mode 0
The mean, median and mode for the number of cases per week are
mean 2.012048
median 1.000000
mode 1

Compare the data against other states:

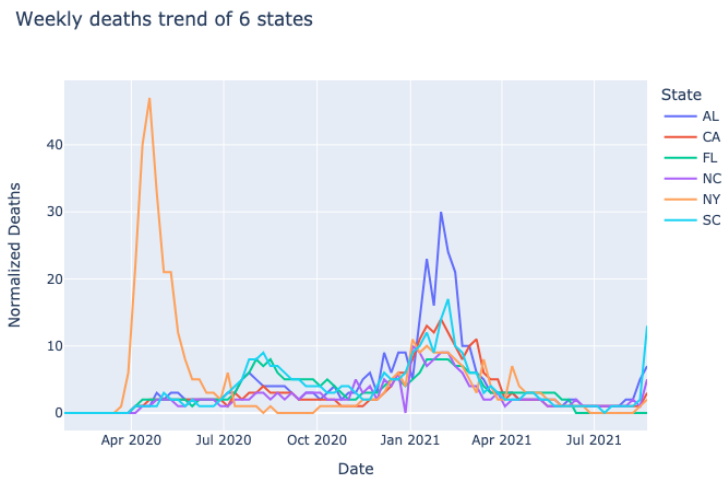
The statistical results which were obtained for the California state are being comparted with five other states which are North Carolina (NC), South Carolina (SC), New York (NY), Florida (FL) and Alabama (AL). To make these comparison's, I have calculated the number of cases and deaths per day, then these cases and deaths are grouped to find out the number of cases and the deaths per week for all the six states.
For these data, normalization is performed as the population is not same in every state. The normalization of the number of cases and deaths are done with respective to the population i.e., the number of cases and deaths are represented for every 10000 people in the state.

Below figure shows the plot of the cases for the 6 states:



Here, I observed that all the states follow the same pattern though the numbers are different. The pattern in which the cases were reported are almost similar for all the six states.

Below figure shows the plot of the deaths for the 6 states:



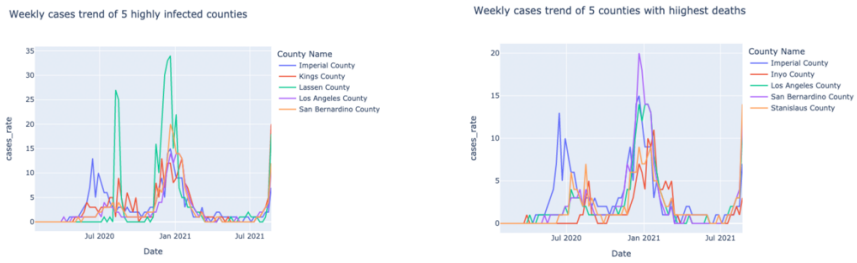
But in the plot of deaths among the six states, I have observed that New York state has highest number of death rates followed by Alabama when we compared to the other states. While the rest four states follow the similar pattern among which almost have their highest peak of deaths in between February and March.

Do they compare with the US pattern?

When we compare the above plots with the US plots, it can be said that the cases follow the similar pattern, where both have the highest peak point in the month January. But the plots of the deaths don't have any similar pattern as they have different peak points.

Identify five counties within a state of your choice with high cases and death rates:

Here, I did the county level assessment to find five counties within a state with high cases and death rates. Th population of the counties is normalized. The top five counties within California state with the highest number of cases are Lassen, Imperial, Kings, San Bernardino and Los Angeles. The top five counties within California state with the highest number of deaths are Imperial, San Bernardino, Stanislaus, Los Angeles and Inyo counties.



The above two plots show the plots for top five counties with high number of cases and deaths. Here, the counties follow almost the similar pattern in the number of cases and deaths except at some points.

The Lassen County has peak point in the cases San Bernardino County has the peak point in deaths. This is because of the population and the count of hospitals the counties had. All the five counties follow almost the similar patter though there is a difference in the numbers.