Viveka’s Indivival task:

s

For the individual task, I have chosen Florida state to analyze its weekly statistics for the number of covid-19 cases and the deaths. Here I have chosen Florida state because there are many elderly people in FL, So I just want to see the how many numbers of covid-19 cases and deaths occurred in FL.

First, I have calculated the weekly statistics for FL state. Then, from the results obtained from the Florida (FL) state are compared with five other states weekly statistics which are North Carolina (NC), Texas (TX), California (CA), Virginia (VA), Ohio (OH). To make these comparisons, first I have calculated the number of new cases and deaths reported per day. Then I have normalized, as every state doesn’t have the same population. So, the number of covid cases and deaths are normalized by the population so that numbers are representative per 100,00 people. The results for these comparisons are reflected in detail in my project notebook

Later I have found the top 5 counties within Florida with the highest normalized means of covid-19 cases and deaths. The top five counties for new cases per week are calculated based on population per 1000 people. After getting the normalized weekly covid cases, deaths mean based on population the top five counties with high covid cases are statewide unallocated, Lafayette County, Miami-Dade County, Gulf County, Liberty County. Five counties with highest covid death cases are Union County, Calhoun County, Jackson County, Highlands County, Suwannee County.

**Weekly number of covid cases:**

Chart, histogram

Description automatically generated

**Analysis**

* We can see that by July 2021 the cases in TX have increased there are around 2600 cases for every 100,000 people.
* In Jan 2021 in Texas there are around 1800 covid cases per 100,000 people.
* In May 2020 ,50 to 100 cases in all the 6 states for every 100,000 people.
* From Jan 2021 the cases started to fall from 500 cases to around 50 cases till July 2021
* We can see the cases in July are high because of the long weekend (July 4th). This might be one of the reasons for the increase in cases.
* We could also see that the covid-19 cases started to increase from Nov 2021 till Jan 2021 end, this might be because of Thanksgiving gathering, Christmas and new year celebrations.
* Finally, we can analyze and say the covid- 19 cases are high during the holiday season.

Weekly number of covid deaths:

Chart, histogram

Description automatically generated

**Analysis**

* Actually, I covid-19 deaths in all the states which I have chosen have similar weekly death pattern, except California.
* In California the covid-19 deaths are high from around mid of Feb 2021 to March 2021.
* In Virginia, there are many covid-19 deaths from Feb 2021 till April 2021, till then the death cases are very low in VA.
* Again, the death cases have increased after July (might be because of July-4th long weekend) there are more spread and death cases
* I could see the death cases are probably increasing after a month of long weekends that might be because of vacations.

**Do they compare with the US patterns?**

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.

The below figure shows the comparison between the data for these counties for new cases per week.

**Top 5 highly infected county- normalized cases rate:**

Chart, histogram

Description automatically generated

* we can see that the covid cases in Miami-Dade County was less from March 2020 to May 2021 all of sudden the cases increased in July 2021.There are around 50 to 60 cases for every 1000 people
* In September 2020 the covid cases in Lafayette County has sky rocketed. There are around 350 to 360 cases per 1000 people
* In May 2020 there are many cases in Liberty County

**Top 5 highly infected county- normalized death rate:**

Chart, bar chart, histogram

Description automatically generated

* Similar to the covid -19 cases the deaths are also more in Lafayette County in the month of September 2020
* Initially in May 2020 the deaths in Liberty County are more
* we can see the deaths in Miami county are less compared with other counties
* we can also see there are a greater number of deaths in Dec 2020, March 2021 and April, May and June 2021, there are no deaths in Gulf County from September 2020 to December 2020.