

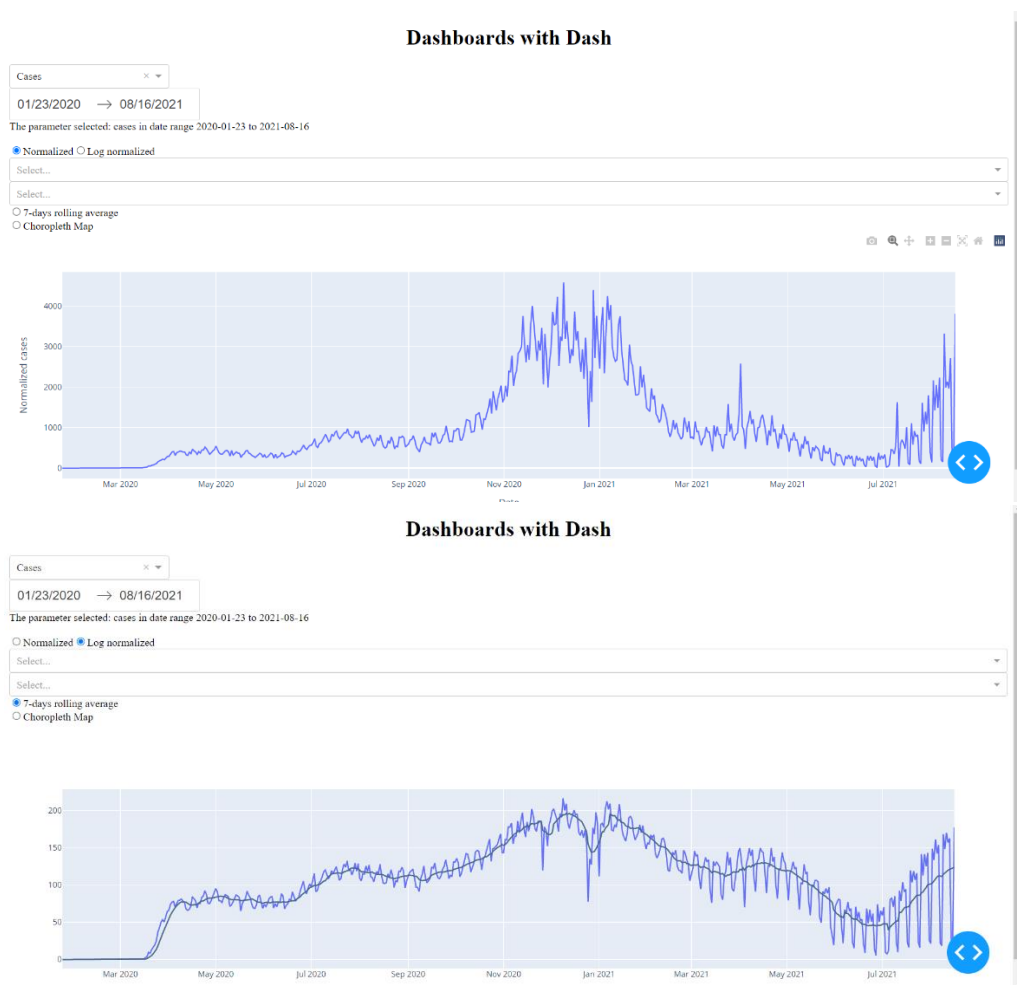
# Project Stage - V

## VISUALIZATION:

In this stage, we focus on visualizing data to depict data graphically because it is a good approach to express data findings. To make the findings more approachable we are integrating plotly plots to a dashboard. We made a user-friendly dashboard which gives few options to user to explore our findings. In order to achieve this dashboard we used dash components of plotly and we added few options to plot trend and that can be changed by user like cases/deaths as input parameter, specific timeline to project the trend, also added normalization, log-normalized option to entire data. We can also project a 7-day running averages predictions and linear/non-linear trend lines to the data. Here are some of the illustrations of the dashboard:

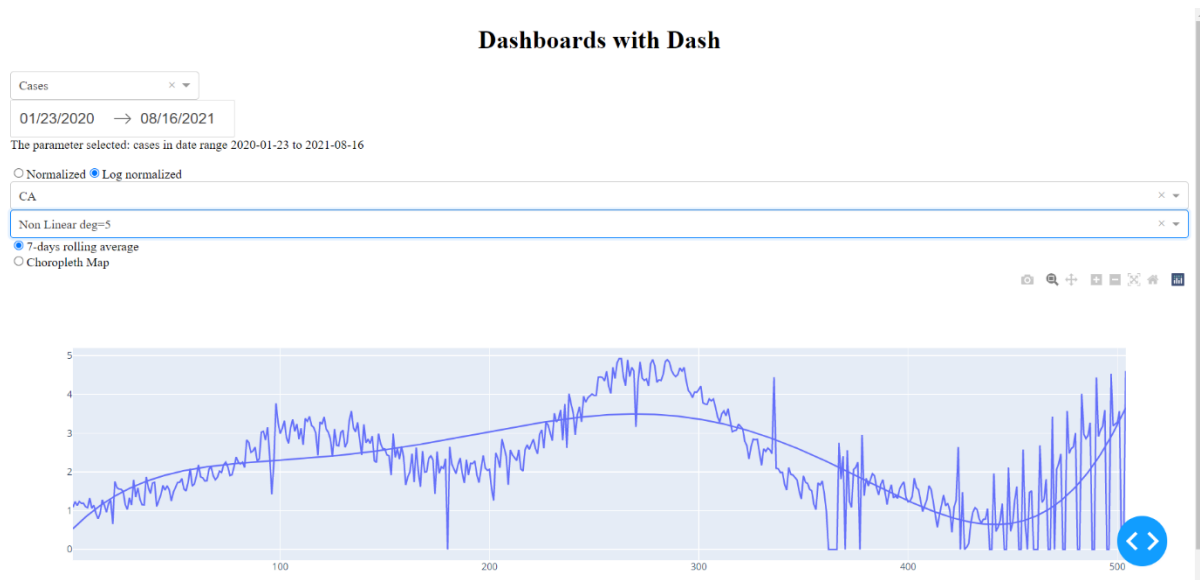
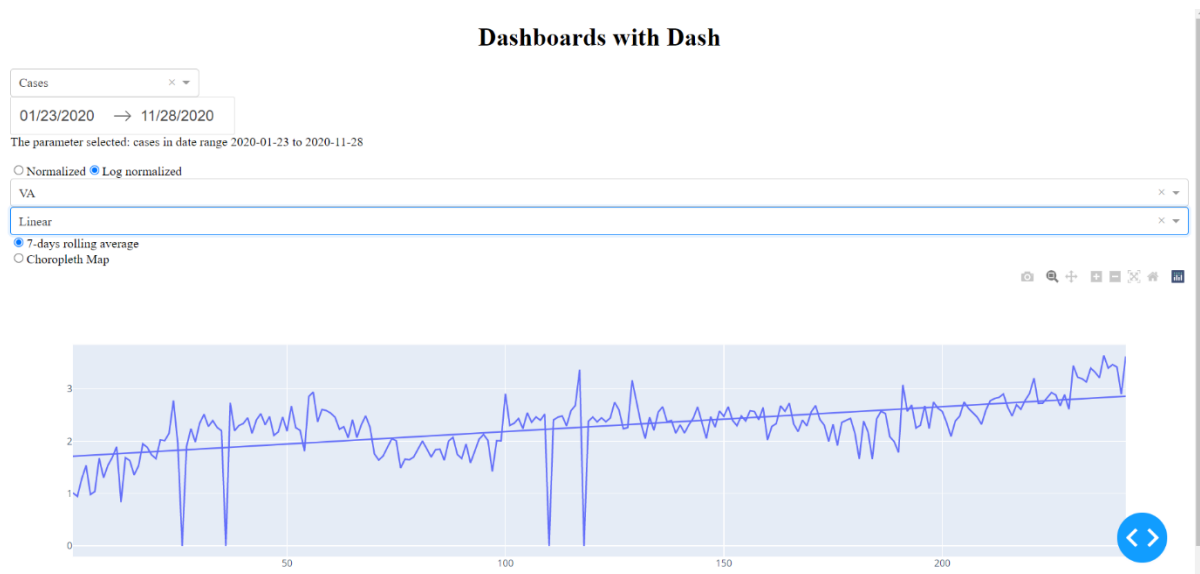
## Main Graph:

Here are the illustrations of the dashboard to show the trend of both covid-19 cases and deaths by selecting date. As we mentioned earlier, we added normalization, log-normalized option along with 7-day moving average and linear/non-linear trend lines to the entire data.



## Trend :

If we observe the dashboard, here the cases/deaths trend line over the mentioned time line. We can also project a 7-day running averages predictions. The data we are working on weekly basis across the united states. Then normalized the cases/deaths to the total population of the state. Here we can select multiple states. Similar approach to counties, normalized the weekly cases to the population of that specific county. So, we can see that y axis has normalised /lognormalised cases or deaths county and x axis has timeline. The following figures illustrates dashboard for both cases and deaths trend for specific state.



## Map:

In this task we took county geojson file from plotly GitHub to project the normalised cases/deaths across USA at county level. There is scale which shows the overall range of normalised cases. When we point on a specific county we can see its normalised cases or deaths as per users interest. In addition we can add multiple features to enhance the interactivity and scope of the plots by adding more plotly and dash components to our present findings. The following figures shows the County level choropleth maps of both cases deaths.

