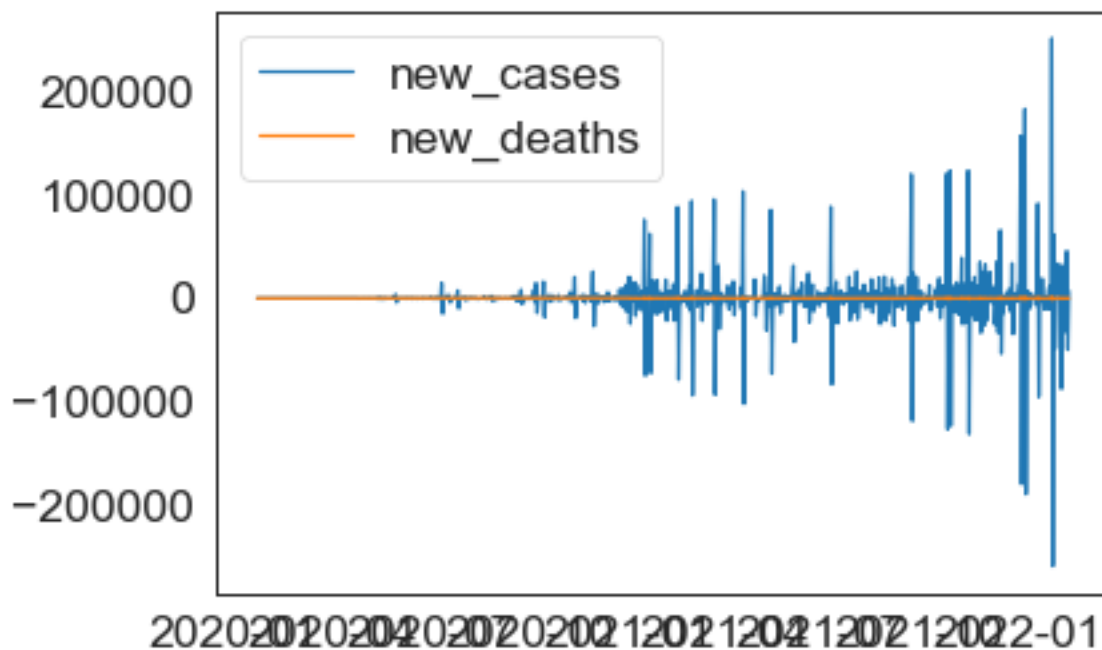# Stage - 2 Report

In the task, we calculated the weekly statistics (mean, median, mode) for number of new cases and deaths across US.

We observed the plot of daily cases cases and deaths of US and compared with other countries.

Statistics Description:

```
The mean number of normalized new_cases in North Carolina are:  32.1707
6096348294
The median number of normalized new_cases in North Carolina are:  13.72
0332522127016
The mean number of normalized new_deaths in North Carolina are:  0.2778
64559704187
The median number of normalized new_deaths in North Carolina are:  0.16
20887094344401
The skewness of normalized new_cases in North Carolina are:  9
The skewness of normalized new_deaths in North Carolina are:  2
The kurtosis of normalized new_cases in North Carolina are:  104
The kurtosis of normalized new_deaths in North Carolina are:  9
```

The mean number of normalized new_cases in New Mexico are: 31.49178736
0189598
The median number of normalized new_cases in New Mexico are: 9.5859032
8538951
The mean number of normalized new_deaths in New Mexico are: 0.42499854
468238485
The median number of normalized new_deaths in New Mexico are: 0.238455
30560670422
The skewness of normalized new_cases in New Mexico are: 7
The skewness of normalized new_deaths in New Mexico are: 2
The kurtosis of normalized new_cases in New Mexico are: 80
The kurtosis of normalized new_deaths in New Mexico are: 8

The mean number of normalized new_cases in Tennessee are: 36.539210861
794764
The median number of normalized new_cases in Tennessee are: 15.3019969
9114417
The mean number of normalized new_deaths in Tennessee are: 0.443856854
947184
The median number of normalized new_deaths in Tennessee are: 0.1610736
525383597
The skewness of normalized new_cases in Tennessee are: 10
The skewness of normalized new_deaths in Tennessee are: 17
The kurtosis of normalized new_cases in Tennessee are: 117
The kurtosis of normalized new_deaths in Tennessee are: 379

The mean number of new_cases in Virgina are: 2139.8137384412153
The median number of new_cases in Virgina are: 999.0
The mean number of new_deaths in Virgina are: 23.70805812417437
The median number of new_deaths in Virginia are: 13.0
The mean number of normalized new_cases in Virginia are: 25.1199875943
55955
The median number of normalized new_cases in Virginia are: 11.72759439
5689035
The mean number of normalized new_deaths in Virginia are: 0.2783168063
961334
The median number of normalized new_deaths in Virginia are: 0.15261133
848243988

The total number of new_cases in Virginia are: 1619839.0
The total number of new_deaths in Virginia are: 17947.0
The total number of normalized new_cases in Virginia are: 19015.830608
927456
The total number of normalized new_deaths in Virginia are: 210.6858224
4187309

The skewness of normalized new_cases in Virginia are: 7
The skewness of normalized new_deaths in Virginia are: 5
The kurtosis of normalized new_cases in Virginia are: 66
The kurtosis of normalized new_deaths in Virginia are: 33

```
The mean number of normalized new_cases in Ohio are:  29.83733550186030
2
The median number of normalized new_cases in Ohio are:  10.308749176583
314
The mean number of normalized new_deaths in Ohio are:  0.39968814673363
63
The median number of normalized new_deaths in Ohio are:  0.085549785697
78683
The skewness of normalized new_cases in Ohio are:  6
The skewness of normalized new_deaths in Ohio are:  10
The kurtosis of normalized new_cases in Ohio are:  60
The kurtosis of normalized new_deaths in Ohio are:  161
```

```
The mean number of normalized new_cases in Alabama are:  34.21642968977
398
The median number of normalized new_cases in Alabama are:  13.909326284
85362
The mean number of normalized new_deaths in Alabama are:  0.47921295015
57145
The median number of normalized new_deaths in Alabama are:  0.183554159
1842853
The skewness of normalized new_cases in Alabama are:  11
The skewness of normalized new_deaths in Alabama are:  4
The kurtosis of normalized new_cases in Alabama are:  153
The kurtosis of normalized new_deaths in Alabama are:  19
```

Analysis after finding correlation between variables:

From the analysis of North Carolina, New Mexico and Ohio states data, we observed how the variables are getting affected by others. We can see there the correlation is less between cases and employment and also deaths and employemenyt. Where as new cases and deaths are highly correlated especially in North Mexico and North Carolina.

Hypothesis Questions:

Can we say the new cases can be directly related to new deaths ?
Can we say the rising or falling number of new covid cases are related to employment numbers ?
Can we say the rising or falling new deaths are related to employment numbers ?