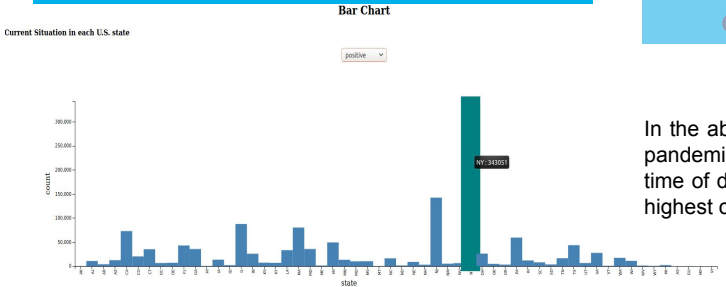
COVID-19 Pandemic Visualization and Analysis

Sahil Mahesh Deshpande:112683210 |Siddhaesh Yadav:112670298 | MS in Computer Science, Stony Brook University.

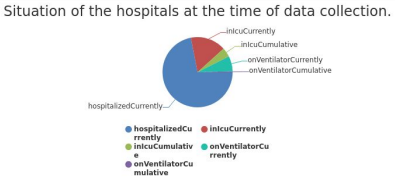
Introduction

In this project we performed visualisation of public health surveillance data with respect to the COVID-19 virus, public health surveillance is the ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice, and at the time of this proposal we feel like visualisation of this data will help us better understand and accept the current pandemic. COVID-19 data visualisation can be used to help public health professionals and health care providers monitor the spread of COVID-19 in the United States and help develop a better understanding of U.S. illness, disease severity, and social disruptions associated with COVID-19. These visualisations help understand the U.S. national public health response to COVID-19.

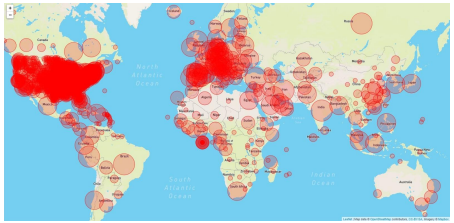
Data / Observations



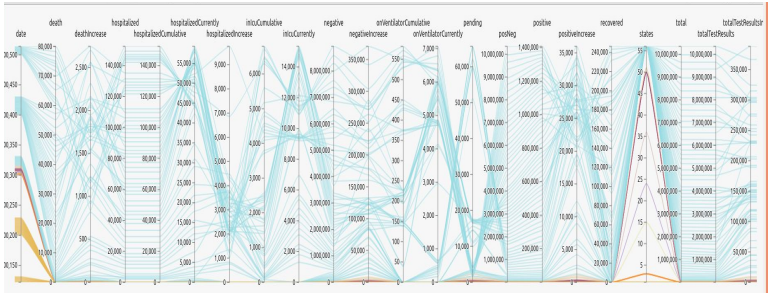
In the above bar graph we see the current situation of the pandemic in individual states of the United States, New York is hit the worst.



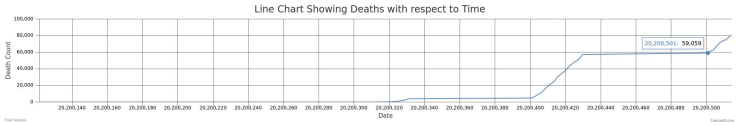
In the above pie chart we see the hospital traffic and resource utilisation throughout the United states



In the above map plot we see the spread of the pandemic throughout the world and how at the time of data collection the United States had the highest concentration of cases.



In the above parallel coordinate representation we can see the overall situation of the pandemic, the data can be analysed over various days and we can clearly see that the pandemic kept getting worse till latest data collection date throughout the United States.



In the above line plot we see the increase in total number of deaths caused by COVID19 across the data collection dates.

Conclusion

In conclusion, after constructing interpretable visualisations of our dataset we were able to track the pandemic; the cases, deaths, hospital activity; and clearly understand the current situation which can be used by people in charge of allocation of resources and curbing of the pandemic to optimise their efforts.