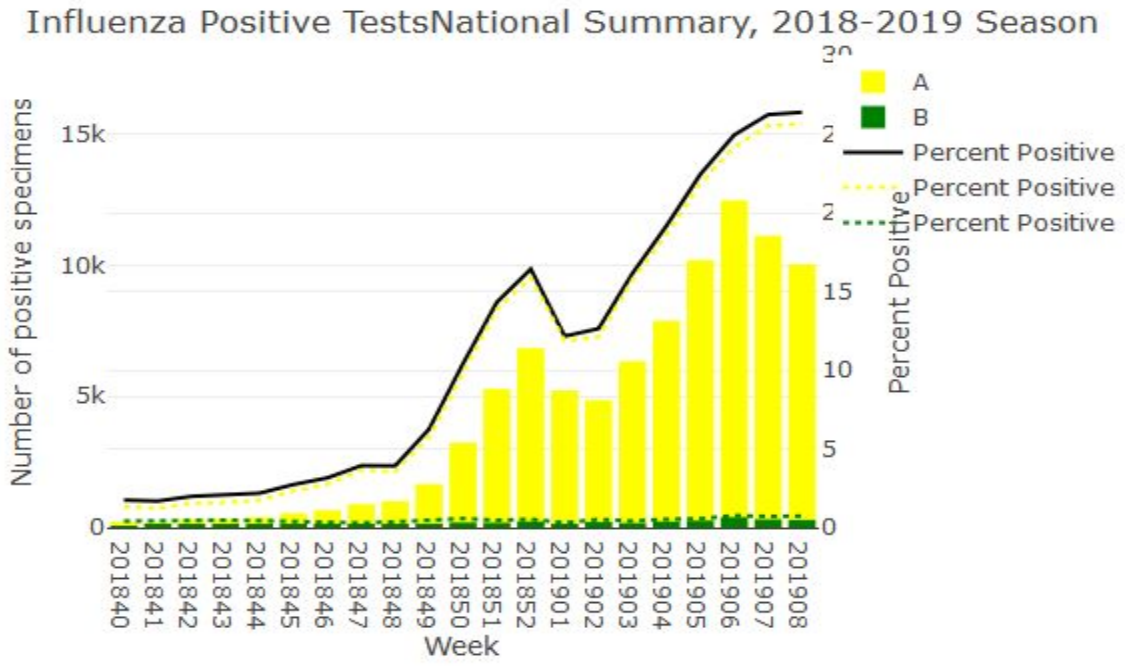
Name : Sravanthi Adibhatla
UBITName of both members: sadibhat, anupriya
UB Person Number: 50288547

EXPLORING DATA ANALYSIS USING R

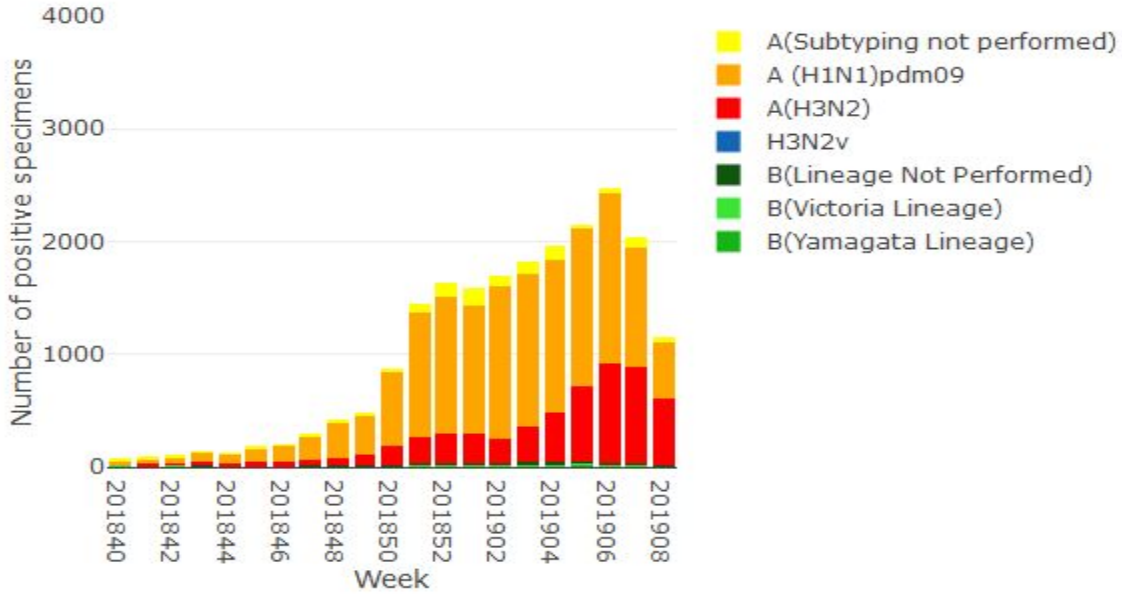
PART 2:

Repeated five of the seven flu charts discussed in the flu report for the week of Jan 28th, 2019.

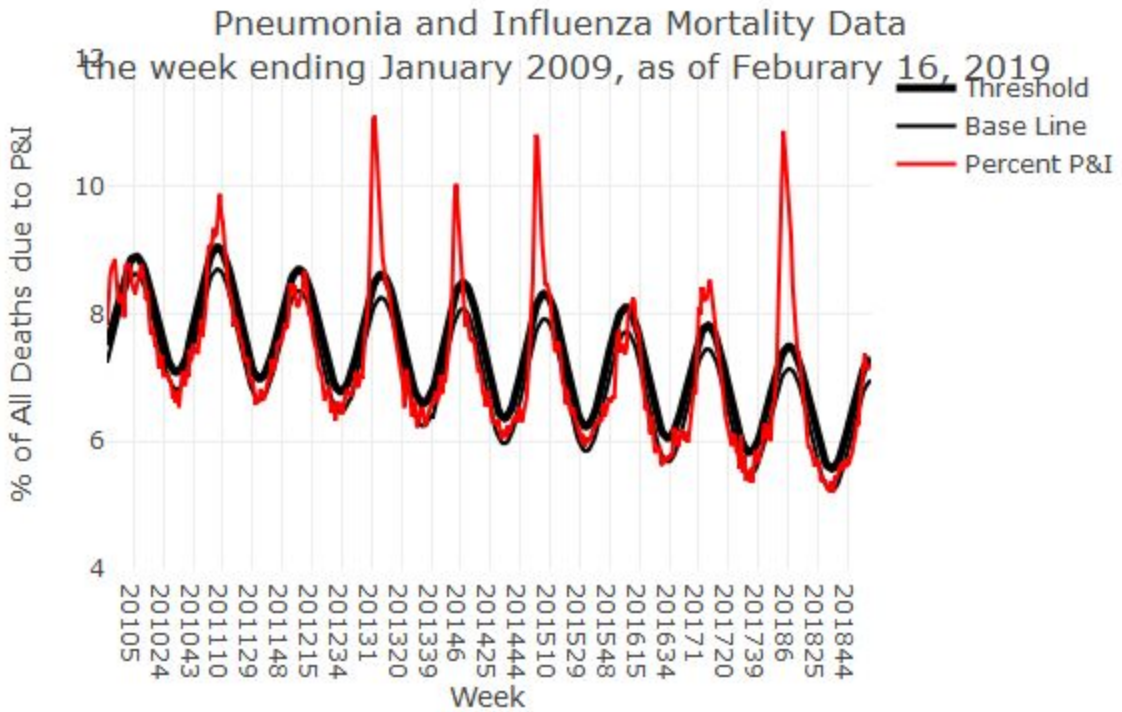
1. Influenza national summary (green and yellow chart)



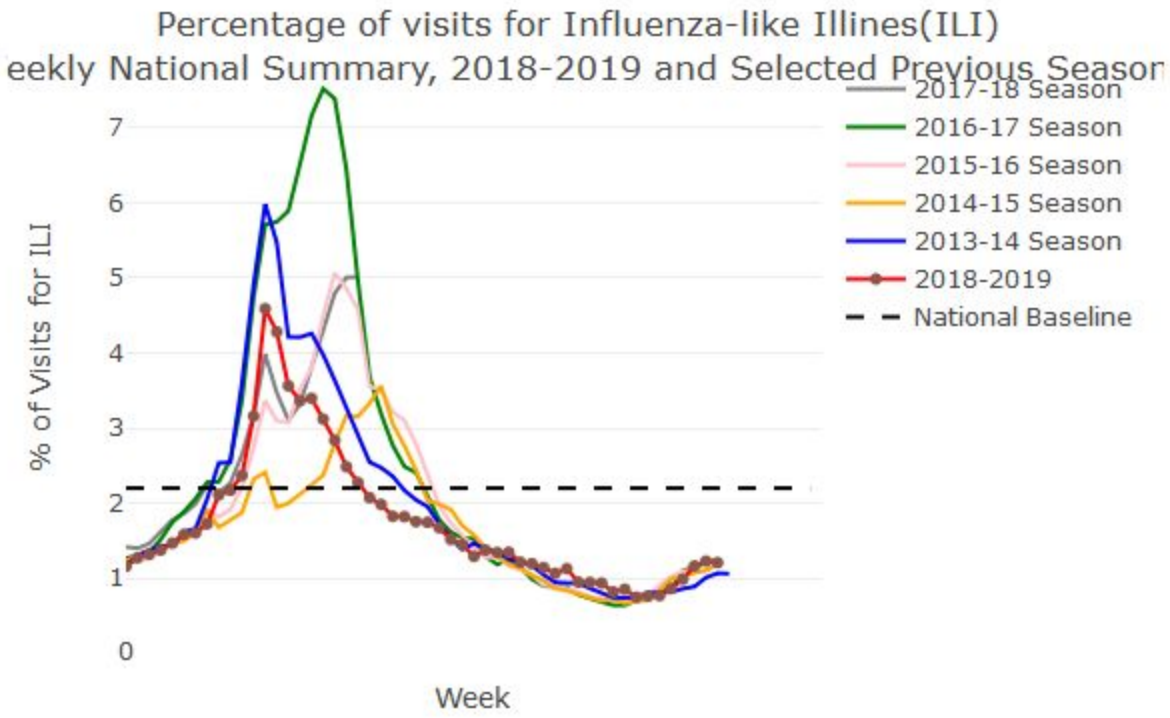
2. <u>Positive tested</u>



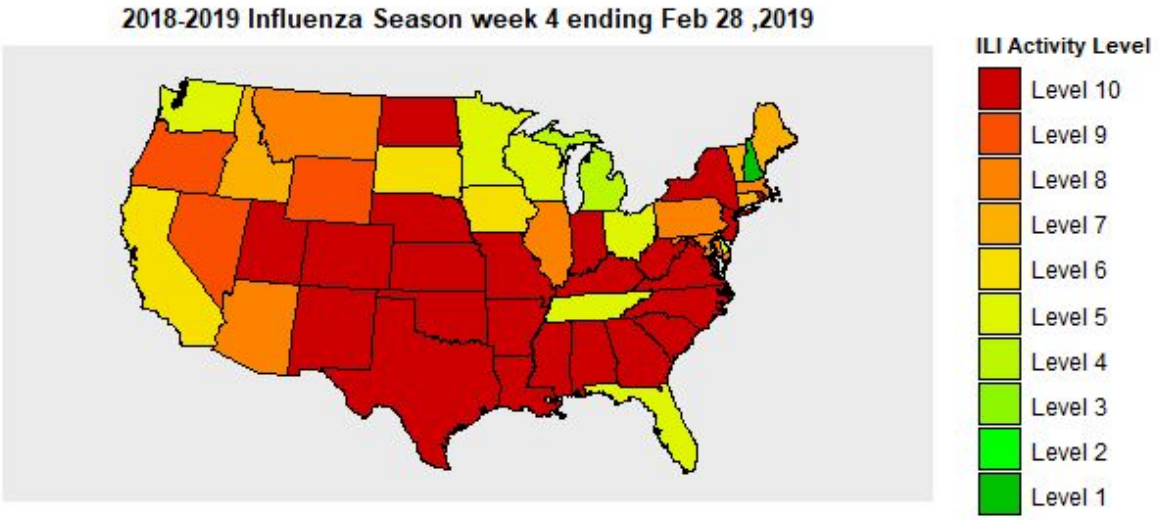
3. <u>Mortality</u>



4. Influenza-like illness



5. Flu heat map of USA



2. **Chart1 and Chart2 the flu pattern for the entire year or 52 weeks**

Chart1: Yearly or 52 week data of National Summary:

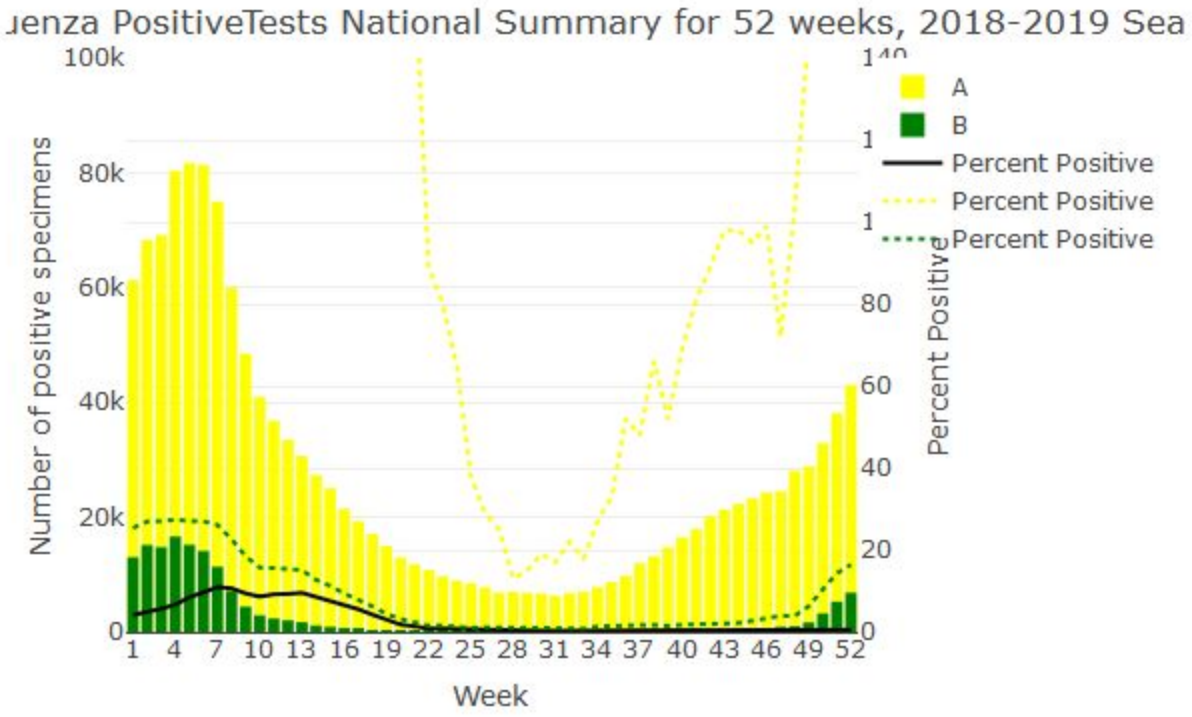
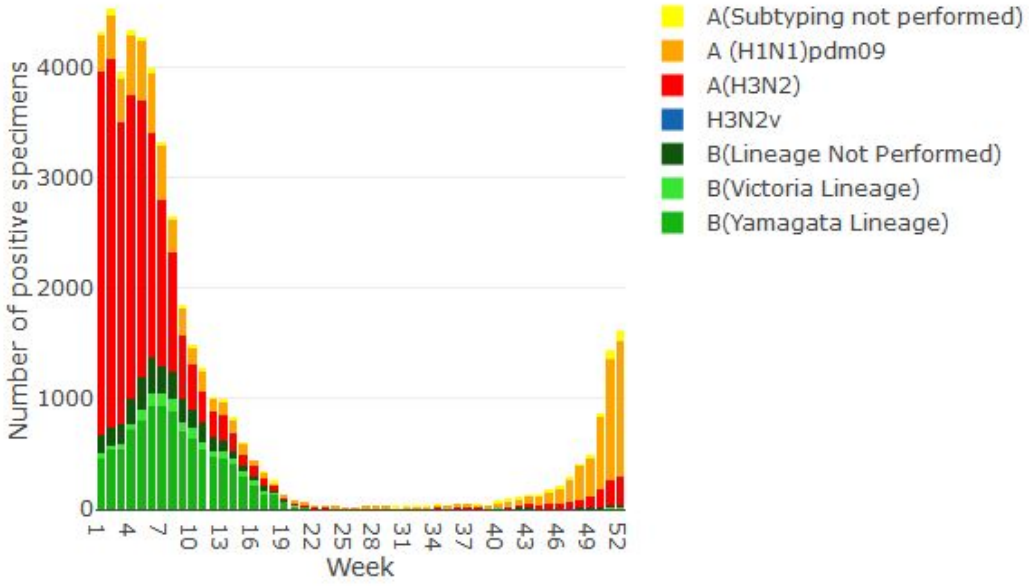
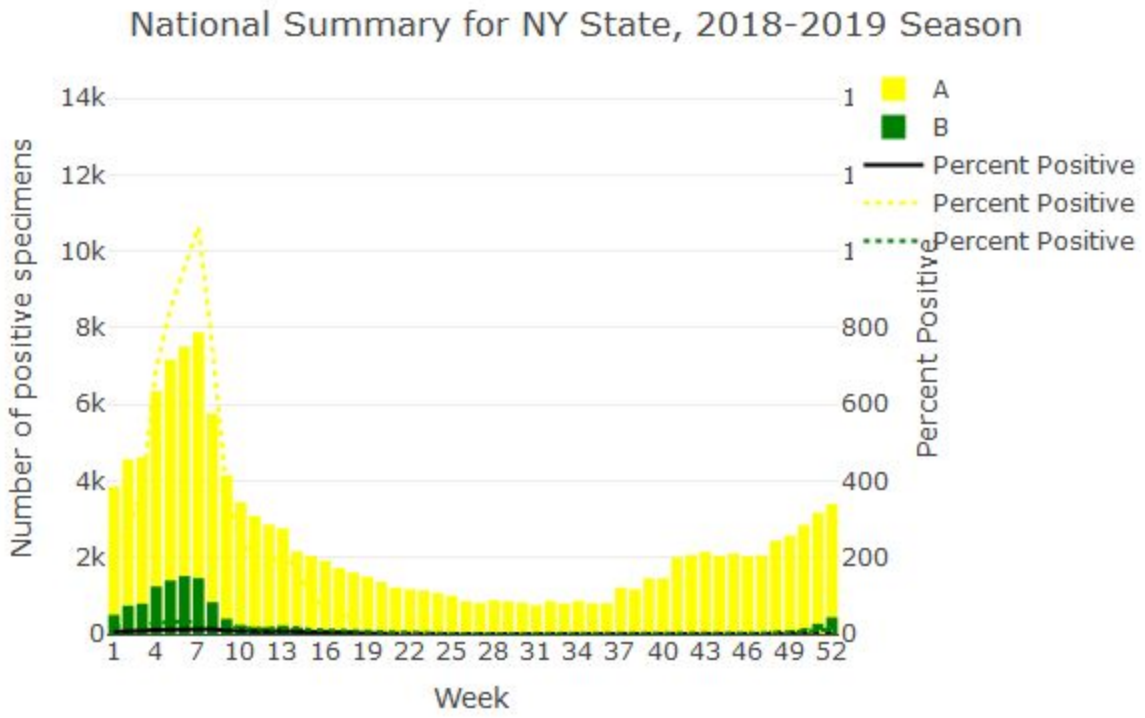


Chart 2: Yearly or 52 weeks data for Clinical Labs:



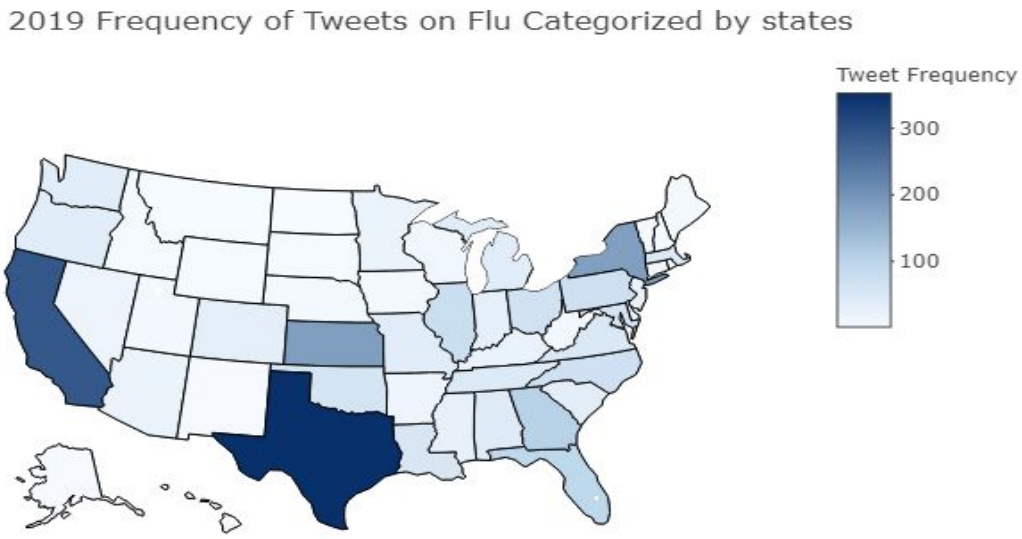
3. Repeating Charts for just New York state.

New York State - 52 weeks data:

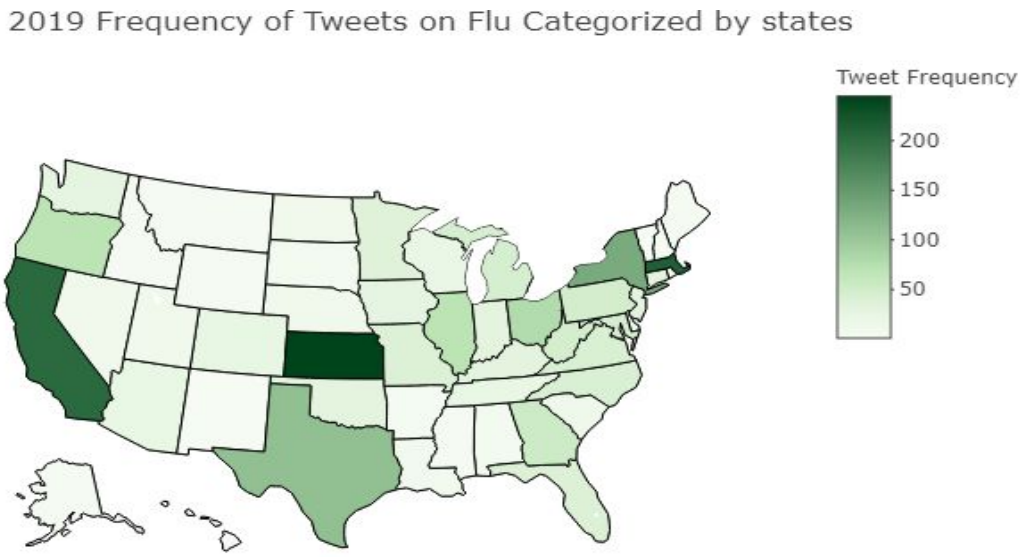


PART 3: Twitter Application Development

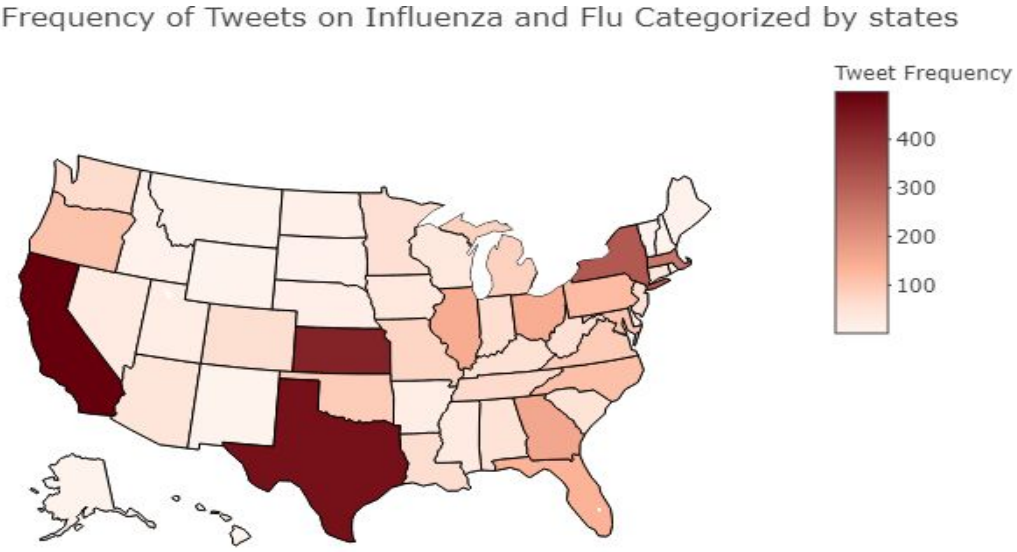
Heat Map of Flu Tweets :



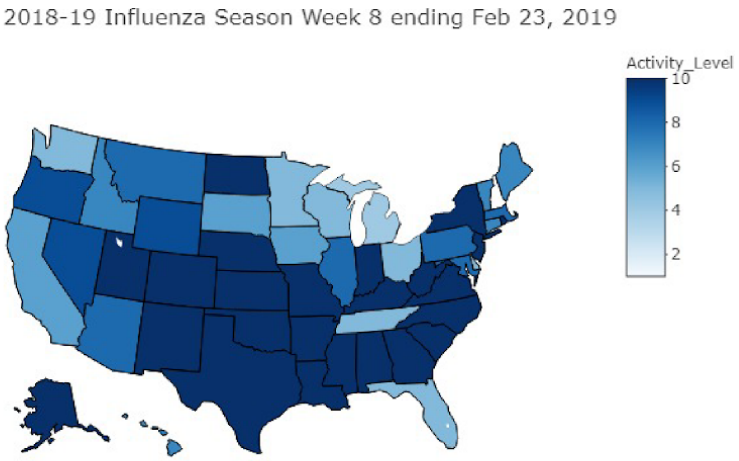
HeatMap for Influenza tweets:

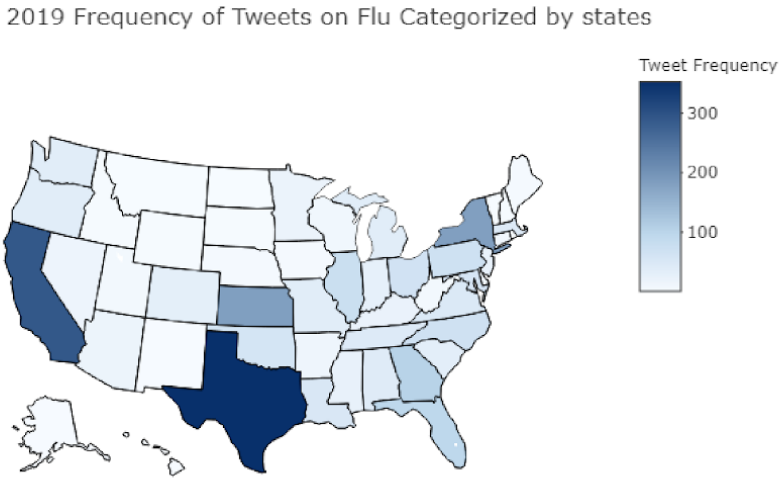


Combined HeatMap for both Flu and Influenza:

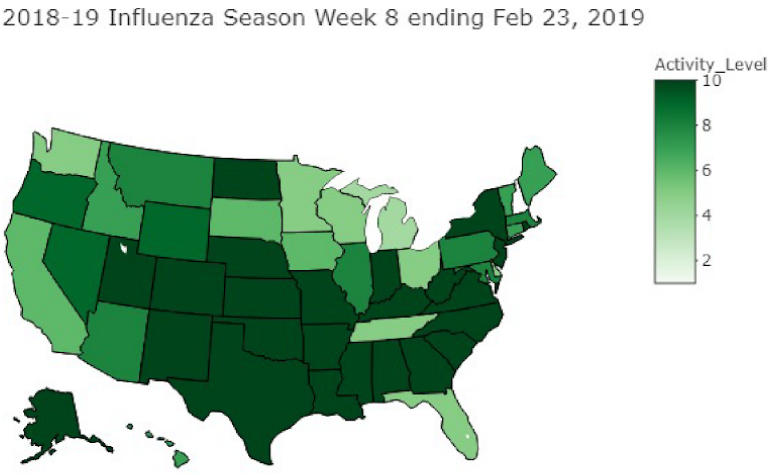


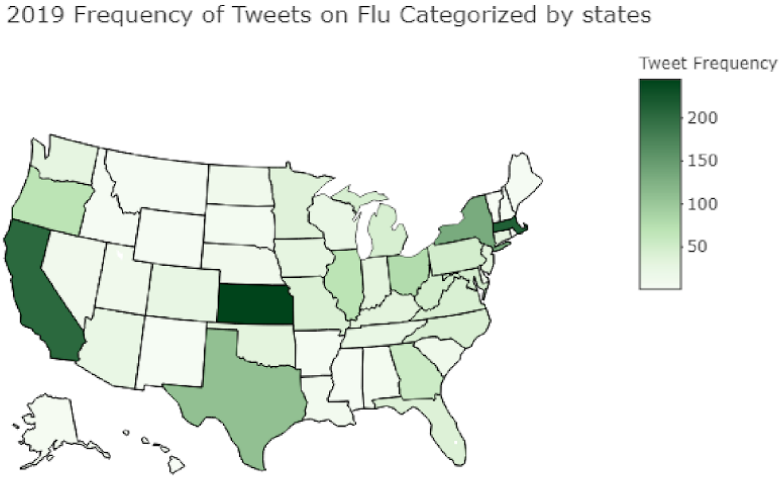
CDC VS Flu Tweets HeatMap:



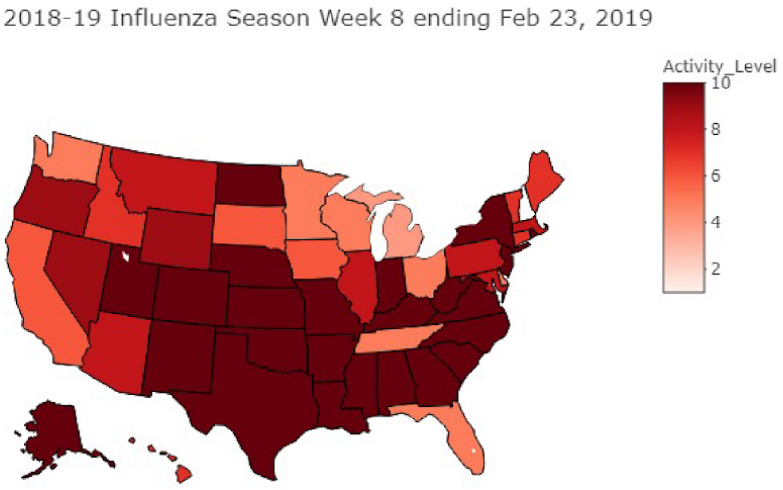


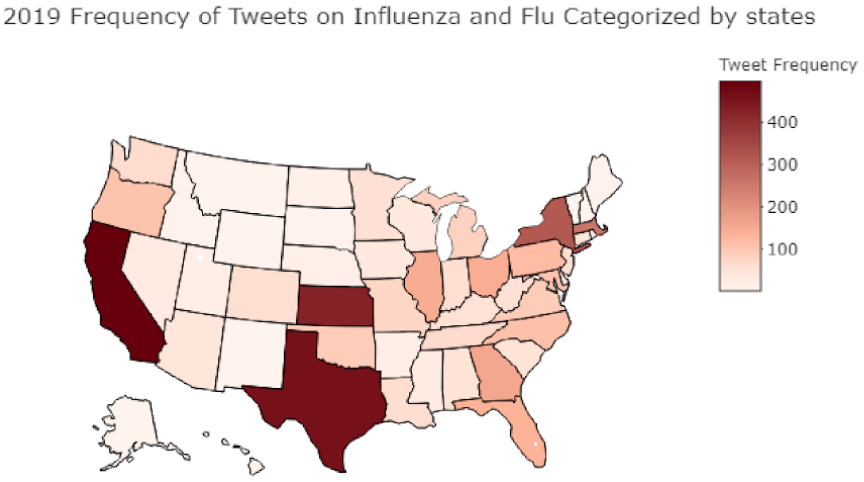
CDC vs Influenza HeatMap





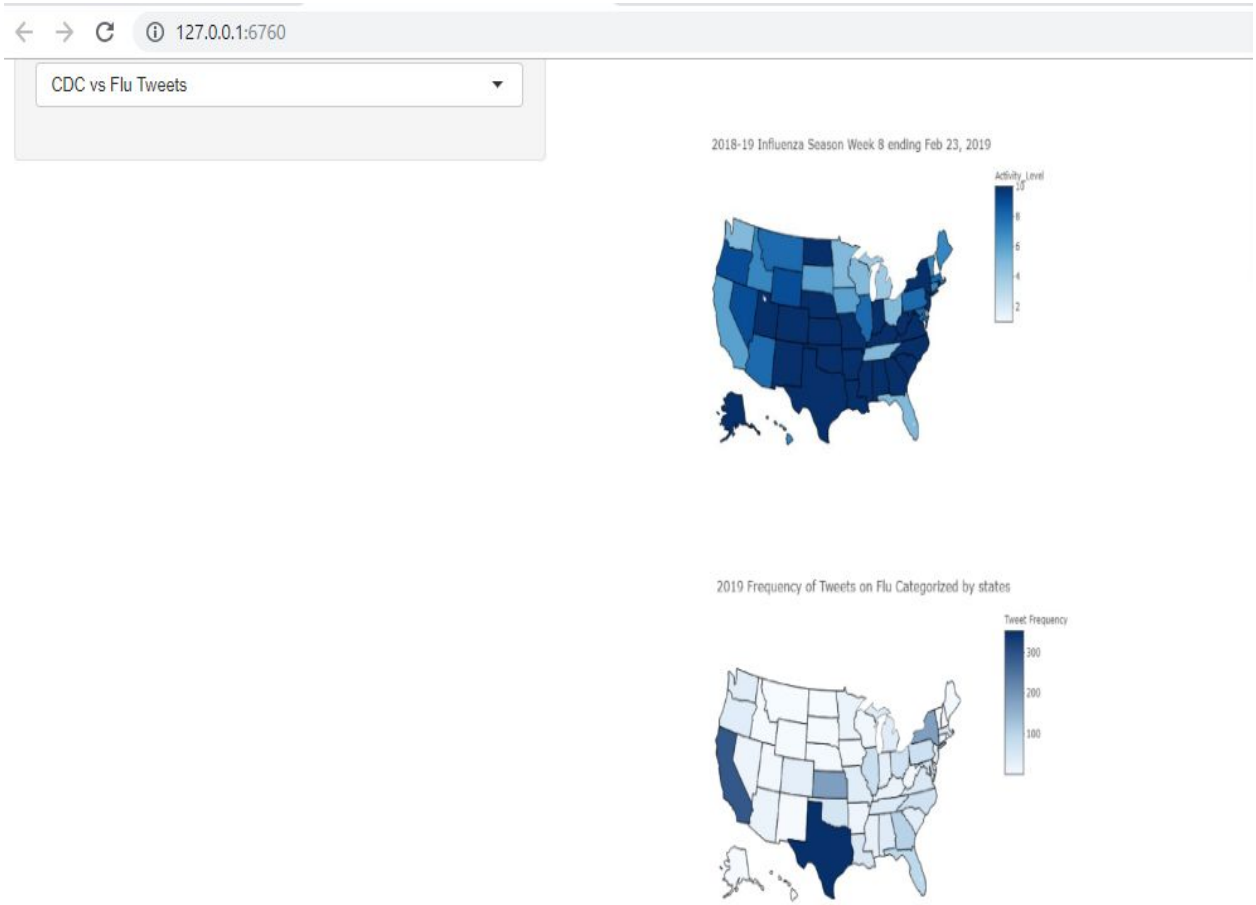
CDC vs All Tweets HeatMap:



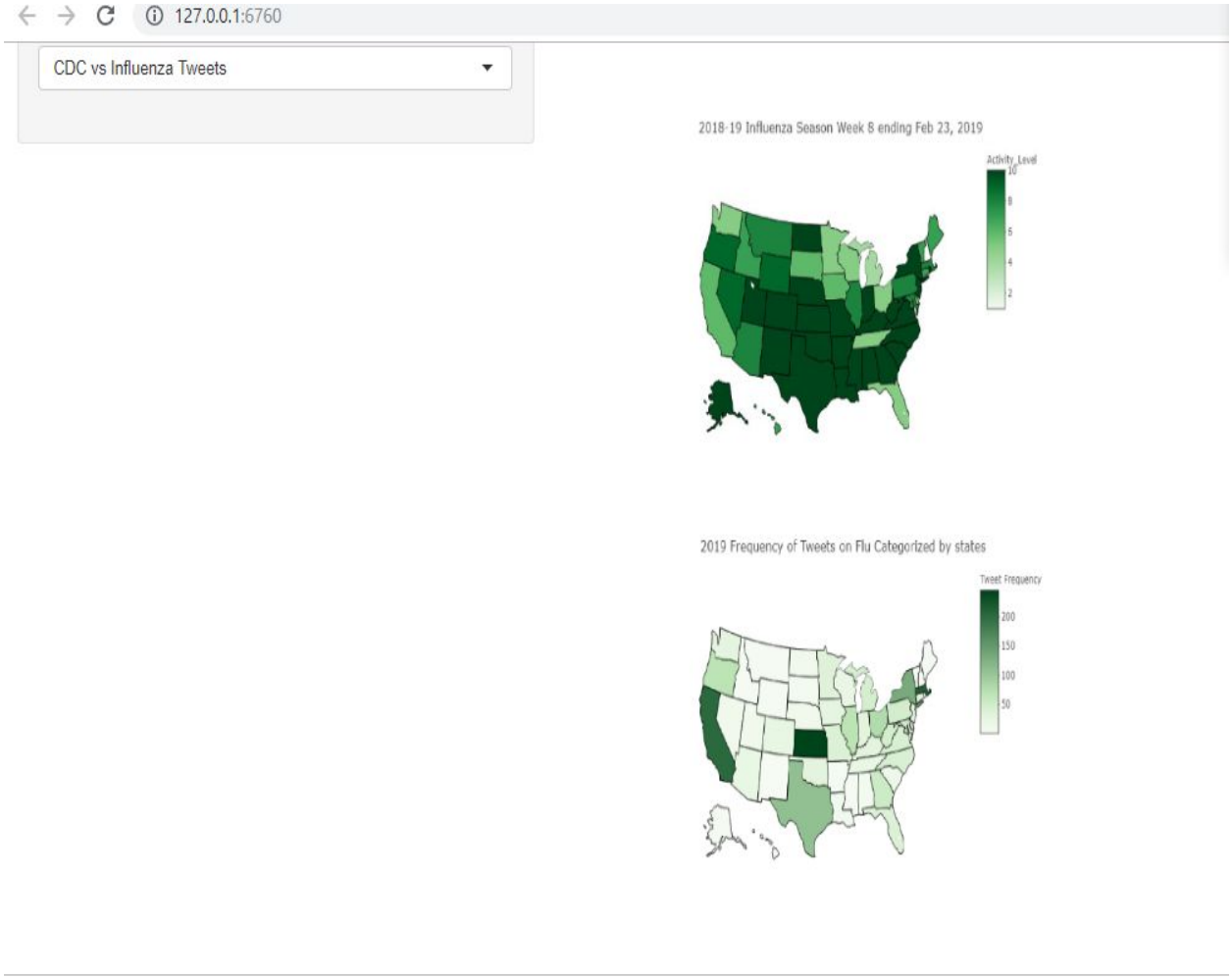


R-SHINY GRAPH DEPLOYMENT:

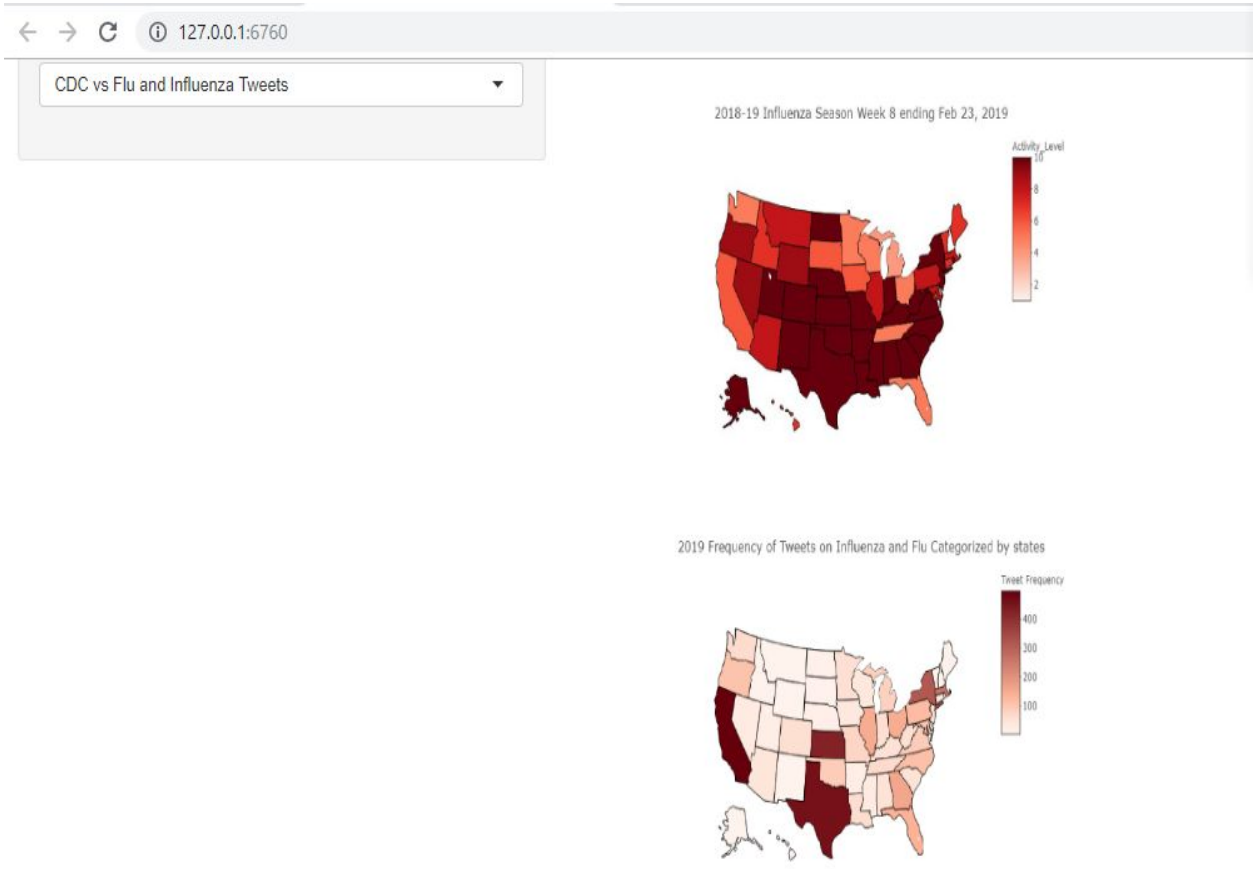
CDC vs Flu tweet heatmap



CDC vs Influenza Heatmap:



CDC vs Flu and influenza tweets:



Analysis and Comparison:

- From the above images, we can draw few conclusions and analysis over the CDC and Tweets data w.r.t flu and influenza tweets as well as combined collection of tweets.
- In case of **all tweets,** if you observe,
    1. Texas has higher frequency of tweets as well as higher activity level.
    2. New Mexico has lower frequency in tweets but higher activity level in CDC chart.
    3. California has higher tweet frequency but lower activity level in CDC chart.

- In case of **Influenza tweets**, if you observe,
    1. Texas has higher activity level but lower tweet frequency.
    2. Kansas has higher frequency as well as higher activity level.
    3. California has lower activity level but higher frequency level.
- In case of **Flu Tweets**, if you observe,
    1. Texas has higher frequency as well as activity level.
    2. California has lower activity level and higher frequency level.
    3. Arizona has higher activity level but lower frequency level.

The tweets frequency is low because may be people have not tweeted in those states but the level of activity of flu or influenza is higher. There are some states where people have tweeted at same rate as level of activity of flu or influenza in those states.