## **COVID-19 Highlights**

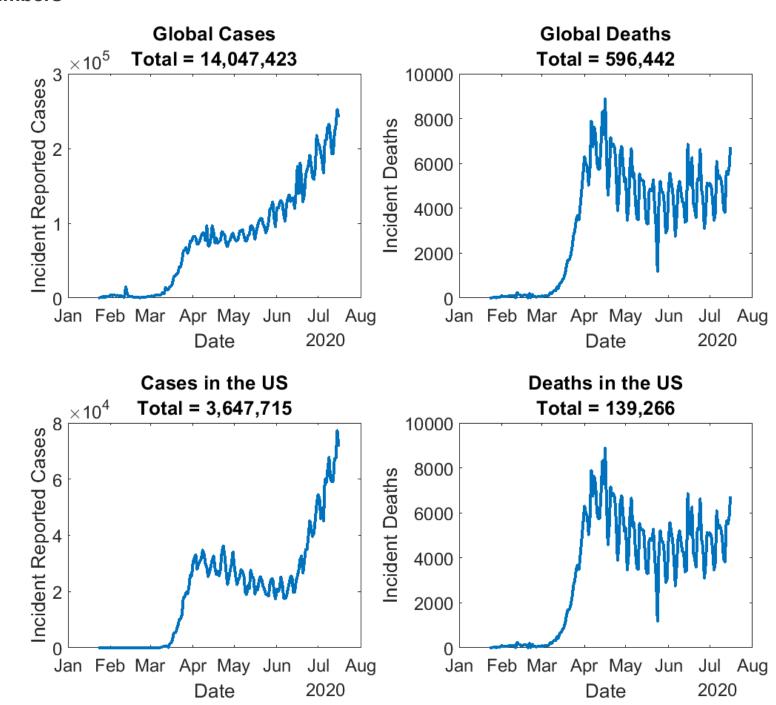
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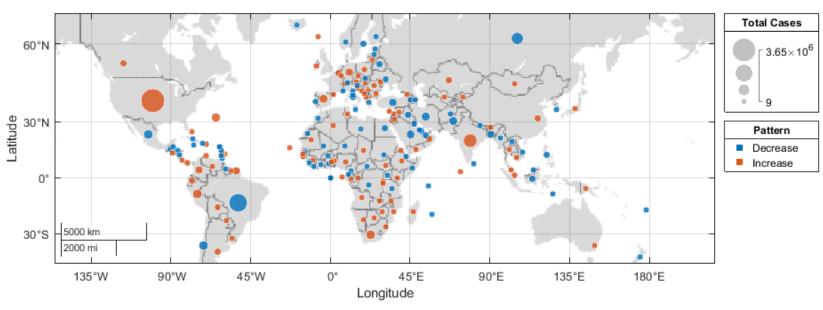
## **The Numbers**



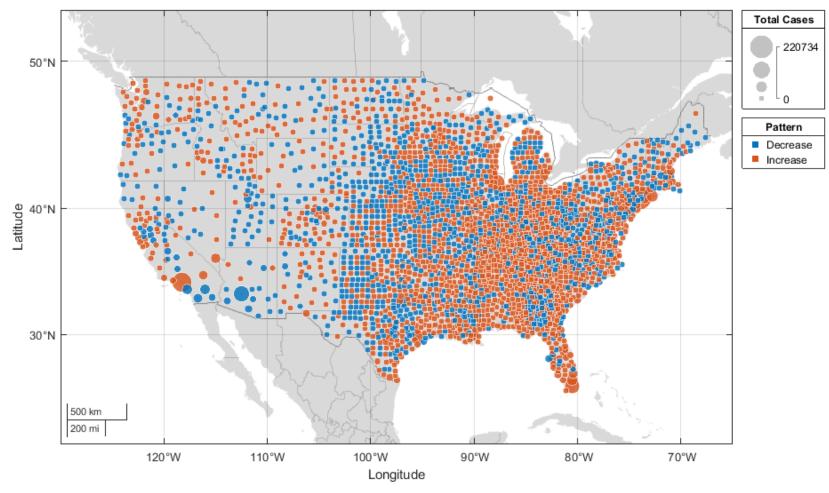
#### **COVID-19** on the Map

Which regions are seeing increase in cases and which ones are seeing a decrease? In the following maps, the size of the bubble represents the number of reported cases in the region (country or county). The orange colored bubbles represent an increase in the weekly number of new cases. The blue colored bubbles represent a decrease in the weekly number of new cases.

# The World



The counties of the US



# **Dynamic Reproduction Number**

The Dynamic Reproudction Number (Rt) measures the potential speed of the epidemic. It measures the average number of new infections created by one infected individual. An epidemic will rise quickly if each infected individual were to create more than one infections, i.e., Rt > 1. On the other hand, if each infected individual creates less than one infection on an average. i.e., Rt < 1, the epidemic will slow down and die out.

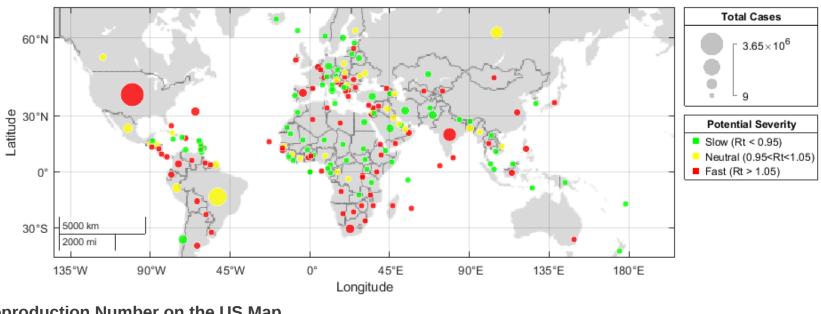
Note: Rt is "learned" from a model. Therefore, the numbers you see here may differ slightly from those shown by other sources due to difference in modeling techniques.

**Latest Reproduction Number on the World Map** The following map shows the potential severity in all the countries, measured in terms of where the latest Rt value stands for each country. In addition, the size of the bubbles represents the number of new cases in the last

# week.

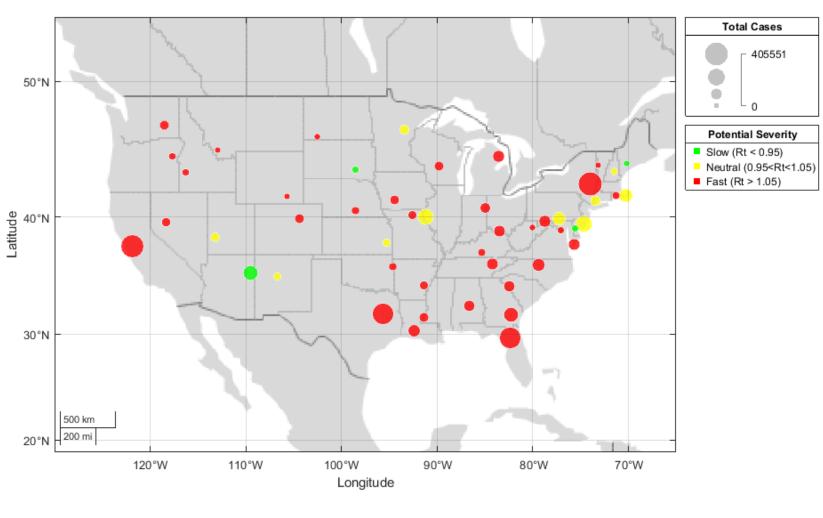
number of new cases have been seen recently, this number is likely to further increase.

A red bubble is likely to expand, while a green bubble is likely to shrink in the near future. The ideal scenario should be a small green bubble, suggesting that the epidemic is close to disappearing. On the other hand, the worst scenario would be a large red bubble, which would indicate that even though a large



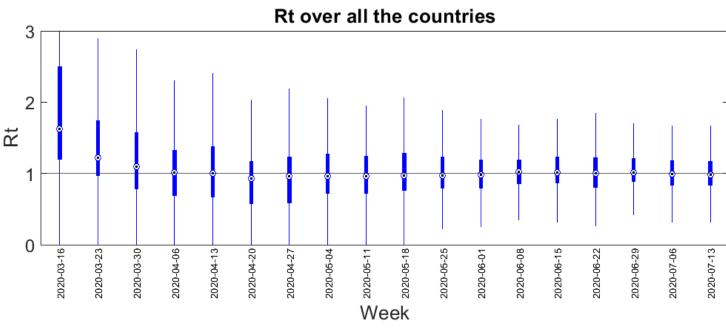
**Latest Reproduction Number on the US Map** The following map shows the same for the US states.

Note: We show the potential severity at the state-level instead of county level, as the Reprodcution Number can be more reliably learned at the state-level compared to the county-level.



**Reproduction Numbers of Countries Over Time** 

The boxplot below shows the median Dynamic Reproduction Number (Rt) of all countries along with the thick line representing the 25th and 75th percentile.



**Reproduction Numbers of US States Over Time** 

The boxplot below shows the median Dynamic Reproduction Number of all US states along with the thick line representing the 25th and 75th percentile. A value of Rt below 1 on a given week implies that if the trends were to continue, the epidemic would have slowed down.