Time Series Forecasting Using National COVID Data

DS 4002

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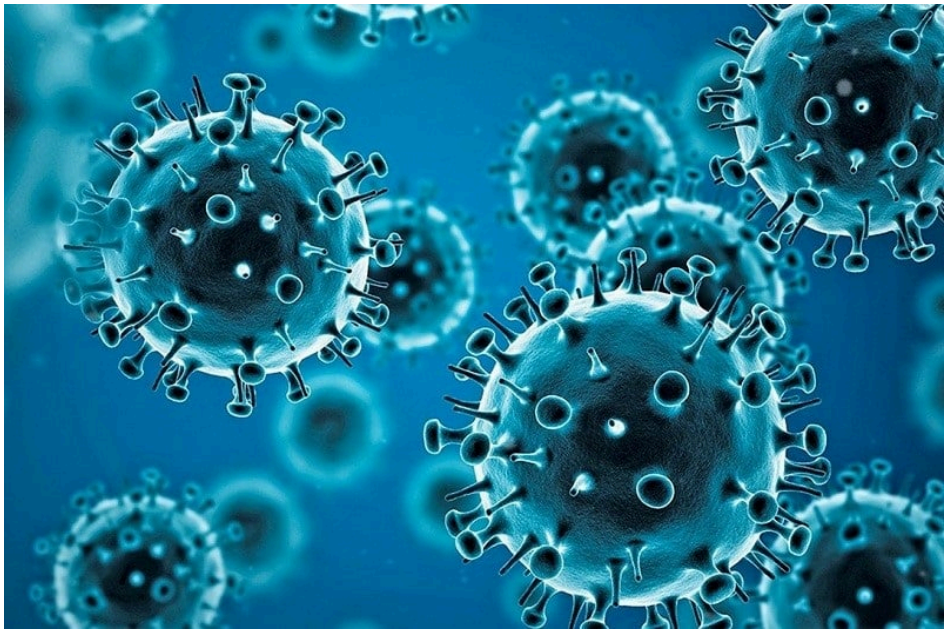

Imagine the country back in 2020. Imagine the problems everyone faces with coronavirus. Many people were hospitalized and even died due to this virus. Families all over the country were impacted by this.

The government increased funding for coronavirus during this time. Vaccine development was ramped up in an effort to get the public vaccinated against coronavirus. There have been many instances of a resurgence of different variants of the coronavirus since 2020 in different places across the country. Each time mutations of the virus popped up, more families were impacted, more people had to be hospitalized, and more people died.

You are a data science student who has just received this data and need to present this information to some officials in the government. Your presentation will let them decide on if they should increase, decrease, or maintain the funding that goes into coronavirus research. You will use time series forecasting and ARIMA modeling to model the data and see if the weekly hospitalizations are related to the weekly deaths. This case study will look into the trends for weekly hospitalizations and weekly deaths due to the coronavirus during 2020 to early 2024.

Image source: https://www.who.int/health-topics/coronavirus#tab=tab_1