Report: Time Series Analysis
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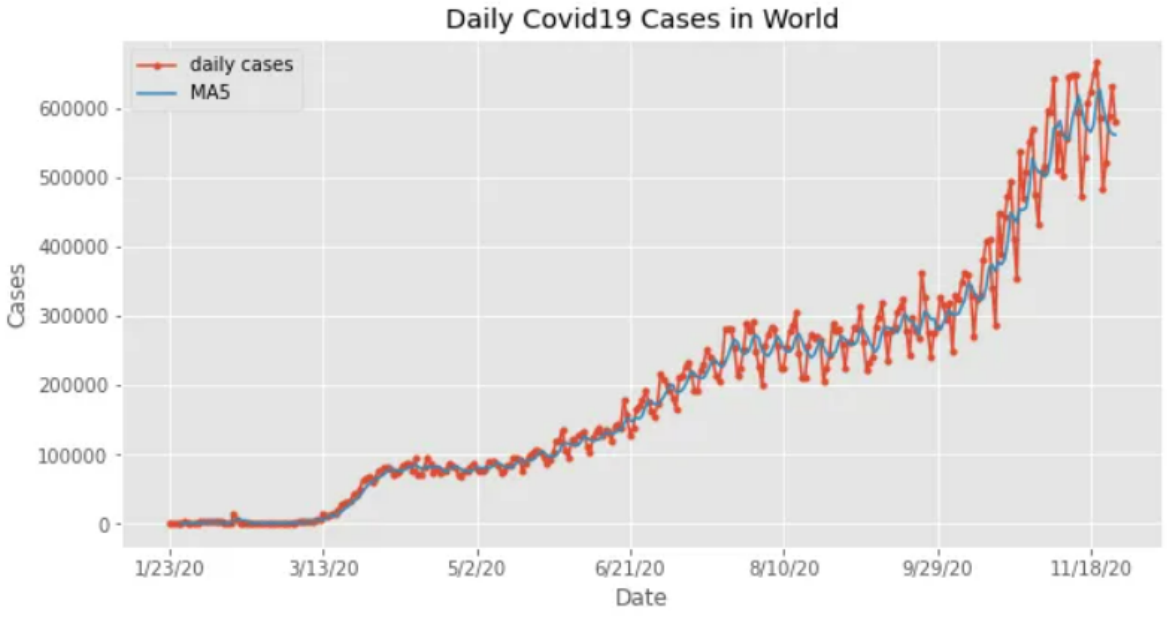
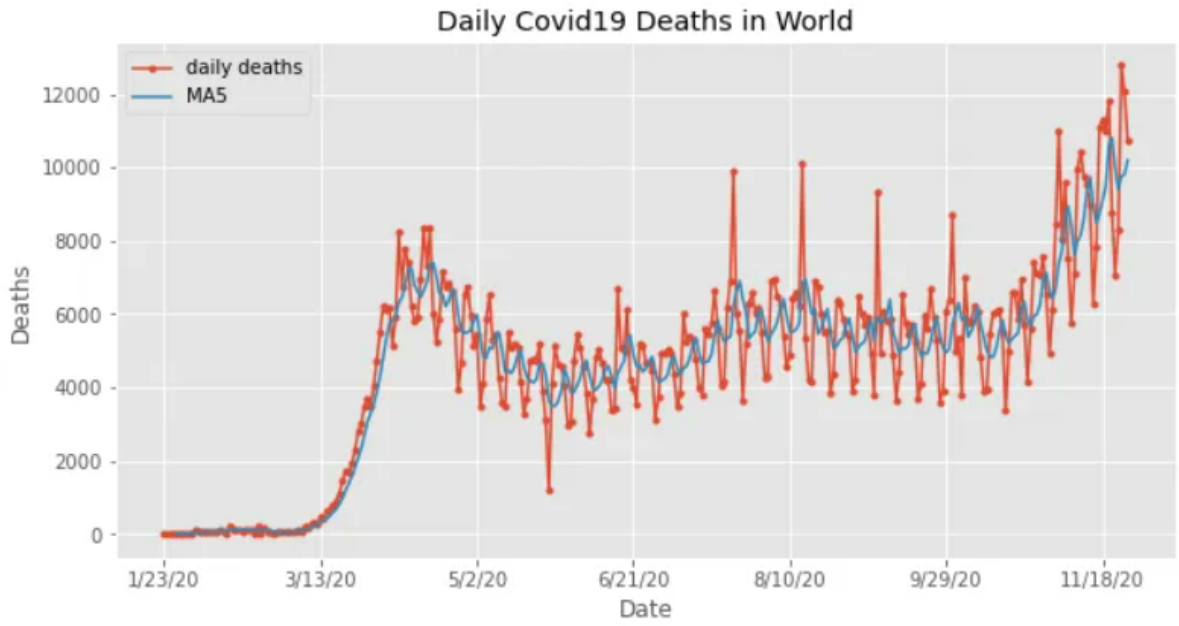
Project on Covid-19 Cases Prediction

In this Project, I will introduce you to a machine learning project on Covid-19 cases prediction for the next 30 days. These types of predictive models help in providing an accurate prediction of epidemics, which is essential for obtaining information on the likely spread and consequences of infectious diseases.
Governments and other legislative bodies rely on these kinds of machine learning predictive models and ideas to suggest new policies and assess the effectiveness of applied policies.

Data Visualization

Visualization will be to have a look at the daily cases of Covid-19 in the world. Then the last visualization will be to have a look at the daily death cases of Covid-19 in the world.





We used the facebook prophet model to predict the covid-19 cases for the next thirty days.

Facebook Prophet

Prophet is a procedure for forecasting time series data based on an additive model where non-linear trends are fit with yearly, weekly, and daily seasonality, plus holiday effects. It works best with time series that have strong seasonal effects and several seasons of historical data. Prophet is robust to missing data and shifts in the trend, and typically handles outliers well.

Accurate and fast

Prophet is used in many applications across Facebook for producing reliable forecasts for planning and goal setting. We've found it to perform better than any other approach in the majority of cases. We fit models in Stan so that you get forecasts in just a few seconds.

Fully automatic

Get a reasonable forecast on messy data with no manual effort. Prophet is robust to outliers, missing data, and dramatic changes in your time series.

Tunable forecasts

The Prophet procedure includes many possibilities for users to tweak and adjust forecasts. You can use human-interpretable parameters to improve your forecast by adding your domain knowledge.

Available in R or Python

We've implemented the Prophet procedure in R and Python, but they share the same underlying Stan code for fitting. Use whatever language you're comfortable with to get forecasts.

Covid-19 Cases Prediction for Next 30 Days