Our submission to Shiny Contest 2020 is triggered by COVID-19 affecting daily lives globally, and we pull efforts together to develop this app to analyse trends of the situation with confirmed cases.

**Objective**

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**Methodology**

The data is sourced from the code written by [Tim Churches (UNSW)](https://rviews.rstudio.com/2020/03/05/covid-19-epidemiology-with-r/) which extracts data from [Johns Hopkins University](https://systems.jhu.edu/research/public-health/ncov/) . In addition, we sourced data about country and province/state population from Wikipedia.

This application differs from other COVID-19 applications by focusing on number of days since the first cases report from each selected country instead of calendar dates. This application ease comparisons among countries with different population scales as the Y-axis scale is logged.

In addition, the application allows linear regression by selected countries, and compare the growth rate with 25% growth rate.

**Main Packages**

We made use of *shiny* and *shinyWidgets* for the mainframe of the application, used *tidyverse*, and *lubridate* to prepare data, and applied *scales*, *ggrepel* to improve the readability of visualisations.

**Limitations**

Data source may contain information that we could not explain. For example, Japan had 1 cumulative case drop comparing between 2020-01-22 and 2020-01-23. We focused on confirmed cases at the moment. Later, deaths and recovered cases may be added into the application.

**Contribution**

We aware that World Bank, and few other organisations are following the app updates to inform their COVID-19 impact analysis.

**Acknowledgements**

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