Impacts of Covid19 Pandemic – Health and Social-Economics

In this project, we intend to analyze data from Our World In Data and World Bank.

How the lockdowns affected the number of cases (deaths/recoveries) in the world (stringency index)

Graph progression of cases, in relation to the progression of the lockdown.

Compare Covid stats on top 5 GDP countries to bottom 5 and analyze how that could have impacted it.

Compare countries with the most cases to find correlations.

Top 5 -

Bottom 5 –

Random 5 -

**Histograms with Matplotlib**

<https://datavizpyr.com/overlapping-histograms-with-matplotlib-in-python/?amp=1>

Number of cases by time | word / selected countries (using function) - Histogram

Number of cases vs stringency index <https://cmdlinetips.com/2019/10/how-to-make-a-plot-with-two-different-y-axis-in-python-with-matplotlib/> - Line Graph

Map – Heatmap graph comparing gdp per capita vs number of cases

Scatter – Identify outliers (medium age)

**Hypothesis Testing and Statistical Tests**

**In order to get declarative analysis with a short time we sticked to top 5 and bottom 5 due to the scope and resources available for a two-week project.  
For more conclusive results, further analysis is required, including all countries.**

**Hypothesis**

* Does having a higher GDP impacted the number of deaths?
  + Alternate hypothesis – The GDP of a country has an impact on the number of Covid deaths.
  + Null Hypothesis – The GDP of a country has no impact on the number of Covid deaths.
* Does having a higher Stringency Index impacted the number of cases?
  + Alternate hypothesis – The Stringency Index of a country has an impact the number of Covid cases.
  + Null Hypothesis - The Stringency Index of a country has no impact the number of Covid cases.

**Assumptions**

* Assumptions: The Data from ‘Our World In Data’ and ‘World Bank GDP Data’ is accurate.

**Limitations**

* Some countries under-reported Covid data.