Analyzing impact of Covid-19 Pandemic and the effect of quarantine in Argentina

Applied Data Science Capstone

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Introduction

The Problem

From the beginning of Covid-19 Pandemic, people's life has changed drastically due to the fast and exponential growth of cases, which leads governments to take decisions on how to prevent the expansion rate of the disease, health system saturation and economic impact.

The common denominator is quarantine. This helps to reduce infection rate, giving more time to governments to prepare health system. In opposition to this positive consequence of quarantine is the economic, social and industrial impact that quarantine has on a country. This positive and negative effect of quarantine makes it a "trade-off" solution.

This study is focused on Argentinian quarantine. First, statistical data of Covid-19 on Argentina will be analyzed: how numbers of cases are distributed on its geography and where are the most affected cities. Then, the effect of quarantine in other areas (such like transport, industry, economic) will be studied and compared with the same period of the previous year.

The Data

To analyze the effect of Covid-19 on the territory, the data from the following website of Argentinian Government will be used:

https://sisa.msal.gov.ar/datos/descargas/covid-19/files/Covid19Casos.csv

With this dataset, we can visualize the impact of this disease with indicators such like:

- Total of cases
- Total of deaths
- Total of recovered patients
- Total of active cases
- Total number of hospitalized patients

- Total of cases on intensive therapy

In addition to this data, the use of Foursquare will help us to visualize the distribution of cases on the country.

After this preliminary study, the work will be focused on analyze and visualize the impact of quarantine on the following areas:

- Economic activity:
  https://www.indec.gob.ar/ftp/cuadros/economia/sh_emae_mensual_base2004.xls
  https://www.indec.gob.ar/ftp/cuadros/economia/sh_emae_actividad_base2004.xls

- Industrial activity:
  https://www.indec.gob.ar/ftp/cuadros/economia/sh_ipi_manufacturero_2020.xls

- Transport (railway):
  https://servicios.transporte.gob.ar/gobierno_abierto/descargar.php?t=trenes&d=pasajeros