**DATA 608 - Final Project Proposal**

**Project**: Interactive visualization of US COVID-19 Cases and Deaths by State over Time

**Author**: Esteban Aramayo

**Description**:

In this project, a publicly available interactive visualization will be created to allow the trend analysis of US COVID‑19 Cases and Deaths by State over time.

Data will be accessed via the Socrata Open Data API (SODA) endpoint available from the Centers for Disease Control and Prevention (CDC). This will allow the user to have updated data on a daily basis as the CDC updates it daily.

CDC reports aggregate counts of COVID-19 cases and death numbers daily online. Data on the COVID-19 website and CDC’s COVID Data Tracker are based on these most recent numbers reported by states, territories, and other jurisdictions.

Our visualization tool will allow us to filter the data by States, territories, and other jurisdictions. Other filtering parameters to be used will be: Confirmed Cases, Probable Cases, New Cases, Confirmed Deaths, Probable Deaths, breakdowns by Day, Month, Quarter, and Year.

**Software to be used**

**Visualization Software**: Plotly and Dash

**Programming Language**: Python

**API Interface to access data**: Access this Dataset via SODA API

**API Endpoint**: <https://data.cdc.gov/resource/9mfq-cb36.json>

**Dataset**:

United States COVID-19 Cases and Deaths by State over Time

<https://data.cdc.gov/Case-Surveillance/United-States-COVID-19-Cases-and-Deaths-by-State-o/9mfq-cb36>

**Variables in this data set**:

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Description** | **Type** |
| **submission\_date** | Date of counts | Date & Time |
| **state** | Jurisdiction | Plain Text |
| **tot\_cases** | Total number of cases | Number |
| **conf\_cases** | Total confirmed cases | Number |
| **prob\_cases** | Total probable cases | Number |
| **new\_case** | Number of new cases | Number |
| **pnew\_case** | Number of new probable cases | Number |
| **tot\_death** | Total number of deaths | Number |
| **conf\_death** | Total number of confirmed deaths | Number |
| **prob\_death** | Total number of probable deaths | Number |
| **new\_death** | Number of new deaths | Number |
| **pnew\_death** | Number of new probable deaths | Number |
| **created\_at** | Date and time record was created | Date & Time |
| **consent\_cases** | If Agree, then confirmed and probable cases are included. If Not Agree, then only total cases are included. | Plain Text |
| **consent\_deaths** | If Agree, then confirmed and probable deaths are included. If Not Agree, then only total deaths are included. | Plain Text |