**ETL PROPOSAL**

**Project Name:**

**“Global Carbon Dioxide Emissions By Country”**

**Name:**

**Kay Royo**

**Project Description & Summary**

* Recent reports reveal that the Covid-19 shutdowns cut carbon emissions down to approximately 17% but how severe was the issue before the pandemic, especially in the United States? The only way to find out about the severity of man-made carbon dioxide emissions before the pandemic is to gather various data from different online sources.

**Questions & Data**

* How much CO2 does the entire United States normally release into the atmosphere even before the pandemic shutdown occurred? To answer this question, different types of data needs to be obtained such as:
  + Greenhouse gas emissions from 2000 to 2020 in the US
  + US CO2 emission by sector (i.e energy, industrial processes, product use, etc) and by state
  + US population by state, which can help determine whether population is related to carbon emission
    - These datasets will be extracted from the following websites:
      * [www.statista.com](http://www.statista.com)
      * [www.data.gov](http://www.data.gov)
      * <https://usopendata.org/>

**Motivation:**

* High levels of carbon dioxide in the atmosphere has negative impacts to the planet we live in and to human health. Therefore, I believe that it is important to organize and examine the different datasets that are available to the public online. As a person who has contributed to and has benefited from activities that increase the CO2 levels in the atmosphere, it is crucial to bring awareness to myself and other about what the US CO2 emission datasets look like before the reported reduction level in the current year.

**API to be Used:**

* TBD

**DATA sets to be Used:**

* TBD

**Libraries to be Used:**

* Pandas
* Json
* TBD

**Goals:**

MVP (Minimum viable product) Goals:

* Obtain some of the data needed depending on availability

Stretch Goals:

* Obtain all of the data needed depending on availability

**Schedule for Completion of Tasks:**

|  |  |  |
| --- | --- | --- |
| **Date** | **Task** | **Notes** |
| **5/21** | Extract all data needed |  |
| **4/23** | Clean/Transform Data |  |
| **4/25** | Load Data |  |
| **4/26** | Finalize Project |  |

**Models & Columns:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Model Name** | **Model Attributes** | **Model validations** | **Model Associations** |
| TBA |  |  |  |
|  |  |  |  |

**Validations:**

**GET and POST API Routes(Restful Routes):**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Resource** | **URL** | **HTTP Verb** | **Action** | **Used For** |
| TBA |  |  |  |  |
| TBA |  |  |  |  |
| TBA |  |  |  |  |

**Requirements**

The requirements for ETL project are as follows.

* Data Extraction
* Data Cleanup & Analysis
* Final Report