**Air Pollution Project Insights**

1. **Dataset Overview:**

The dataset under consideration pertains to the assessment of air pollution and air quality for various cities and countries over the six-year period spanning from 2017 to 2022. The dataset exhibits a distinctive structure, wherein the information relating to both the country and the city is contained within a single column. Additionally, it is notable that the dataset contains numerous instances with missing or blank values.

1. **Data Assumptions and Analytical Segmentation:**

* Null or Blank values are filled with **Mean/Average** value of respective columns.
* Analysis is done on 2 different section that is Month wise and Year wise.

1. **Data insights:**

* Data has total unique **137** countries and **6847** cities.
* **Month wise analysis:**
* In accordance with the dataset, it is observed that **Lahore**, located in Pakistan, exhibits the highest level of air pollution among the cities considered, with an average air pollution reading of **97.35**.
* Conversely, **Arch Cape**, a locality situated within the United States, records the lowest average air pollution among the cities, with a markedly lower figure of **0.275**.
* On a broader scale, the **USA** itself ranks as the most polluted country in the dataset, demonstrating an average air pollution level of **20,531.20**.
* In contrast, **Guam** emerges as the country with the lowest average air pollution, recording a notably lower value of **3.94**. These findings underscore significant disparities in Monthly air quality between different cities and countries as per the dataset.
* **Year wise analysis:**
* As per the dataset, it is evident that **Ghaziabad**, a city in India, consistently reports the highest yearly average air pollution levels, with a substantial average reading of **114.53**.
* Conversely, **Emu River**, situated in Australia, consistently maintains the lowest yearly average air pollution levels among the cities, with a notably lower value of **2.3**.
* On a national scale, the **USA** emerges as the country with the highest levels of air pollution throughout the years, registering an astonishingly high average air pollution reading of **36,084.19**.
* In stark contrast, **New Caledonia**, as a country, consistently records the lowest yearly average air pollution levels, with a considerably lower average value of **10.13**. These observations underscore significant variations in yearly air quality between cities and countries, as indicated by the dataset.