**Air Quality Report**

**Database- CSV file**



**Transformation-**

1.Making first row as header.

2.Replacing null value with 0.

3.Adding Conditional column to mark missing value as “Others” in AQI\_Bucket column.Then replacing the new column with the old one.

4.Changing the data type for “Date” column from text to date.

5.Renaming the columns.

Saving and closing the transform screen to start building visualization.

**Visualization-**

1.Set report title using textbox and shapes with adequate color composition.

2.Used Clustered Bar Chart to represent top 5 polluted cities and least 5 polluted cities after applying filter.

3.Used 100% Stacked Bar Chart to represent range of AQI condition among different cities.(AQI\_bucket)

4.Indicated major pollutants like PM2.5,CO,No2,So2,NO average levels using Cards.

5.Used Maps to indicate the cities present in the dataset.

6.Used Line chart to represent the trend of Avg AQI over 2015-2020.

7.Added Dynamic slicer which operates using Images and shapes.

**Note-Added some additional shapes to enhance the overall visualisation**

**\*Key Insights derived from the report are-**

* Average of AQI trended **down,** resulting in a **22.05%** decrease between **2015-2020**.﻿
* ﻿Sharp increase in Avg AQI for year **2017-2018** and sharp decline for year **2019-2020**.

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* ﻿﻿At **603k** and **519k** avg AQI **Ahmedabad and Delhi** respectively are one of the most polluted cities followed by **Lucknow,Patna and Gurugram**.
* At **4k** and **11k** avg AQI **Aizwal and Shillong** are one of least polluted cities followed by **Ernakulam,Kochi and Coimbatore**.

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* **Ahmedabad ,Guwahati,Amritsar** are the top cities with most﻿ "**Severe**" conditions over the years
* **Bengaluru,Chandiagrh,Vishakhapatnam** are the top cities with most﻿ "**Very Poor**" conditions over the years