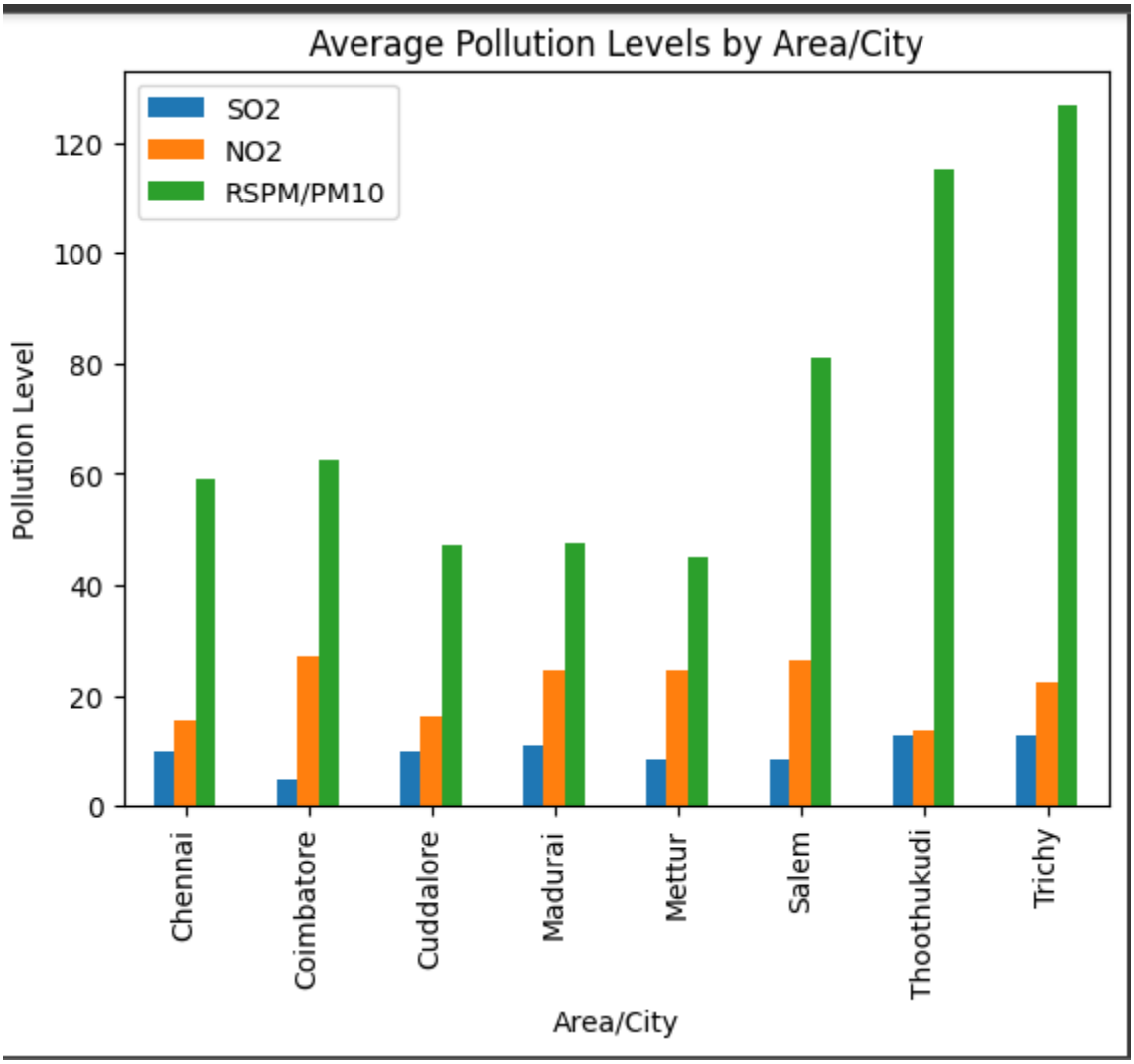
Type of visualization used in project and the usage of the visualization

Bar Chart:

- Bar charts are used to compare categories of data. They can be vertical or horizontal and are often used for showing frequency, distribution, and comparisons between different categories.
- Here in our visualization we use the bar chart to describe the **Highest rate of SO2 ,NO2, plotted against the Type of Monitoring Station,city/area/village.**



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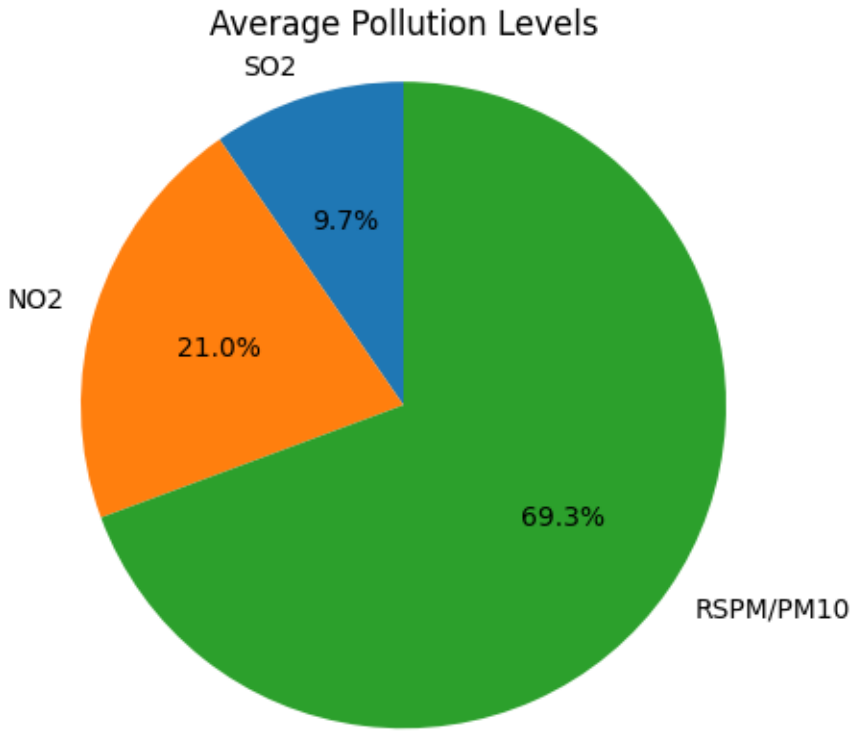
Pie Chart:

- Pie charts represent parts of a whole. They are useful for showing the distribution of categories as a percentage of the total.

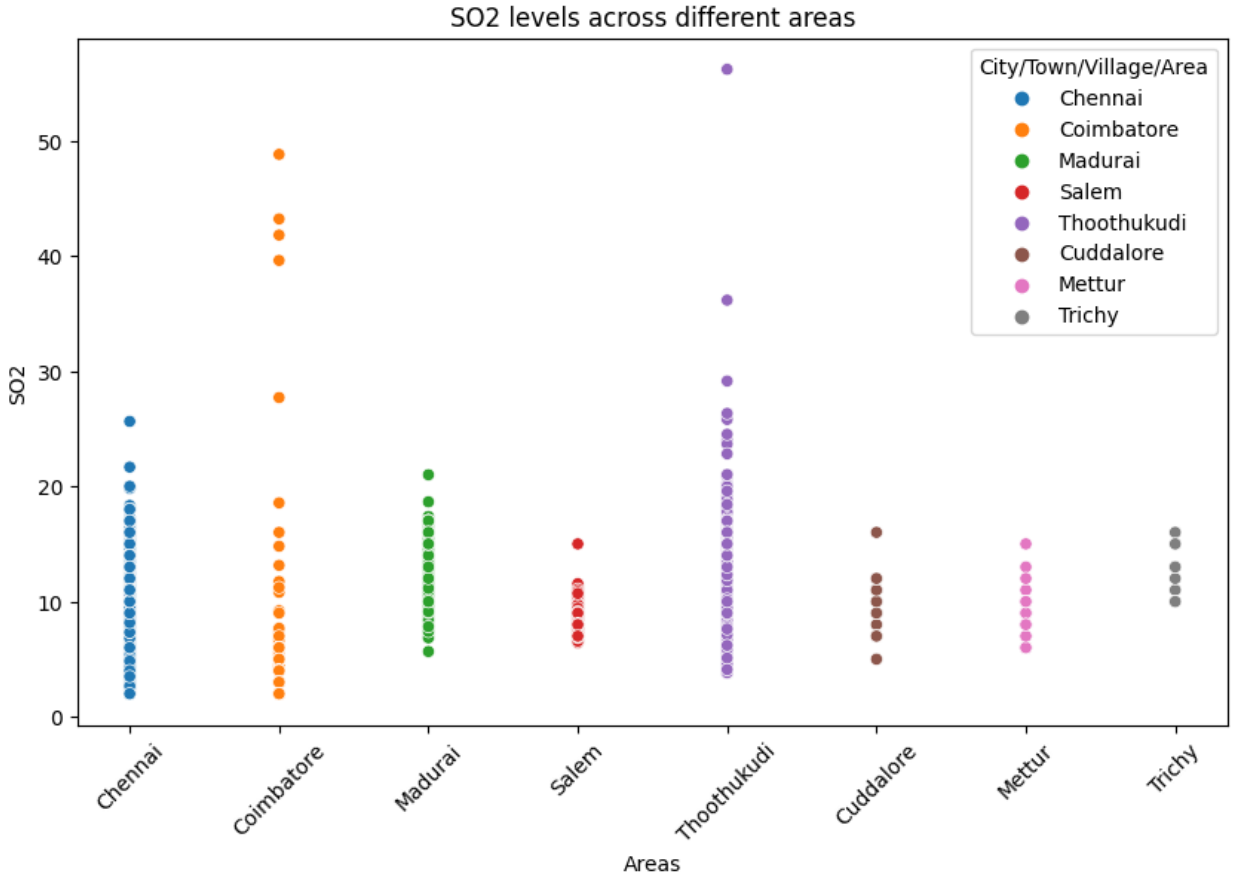
- In our visualization we use the **pie chart to describe the overall percentage of the NO2,SO2,RSPM range across different area and monitoring station.**

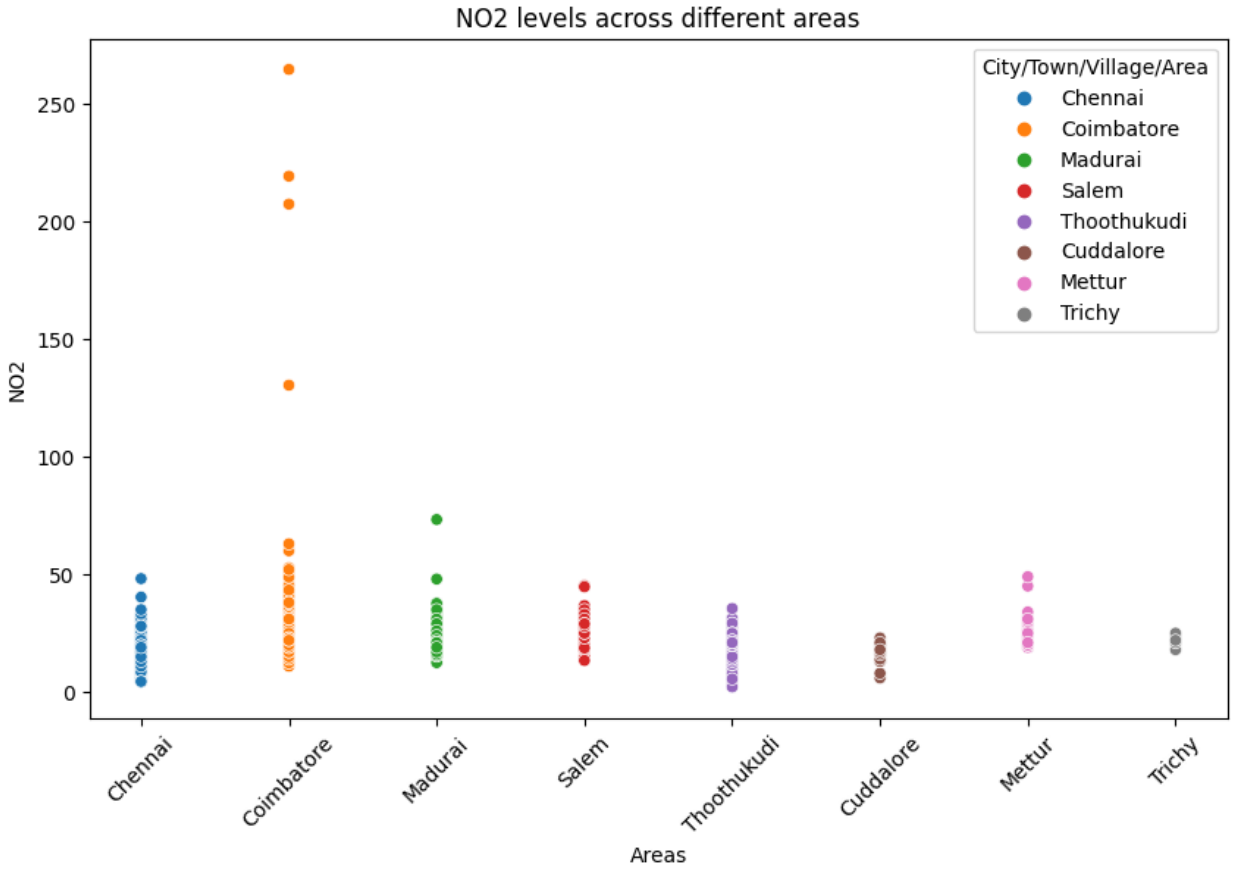


Scatter Plot:

- Scatter plots are used to visualize the relationship between two variables. Each data point is represented as a dot on the chart, making it easy to identify patterns or correlations.

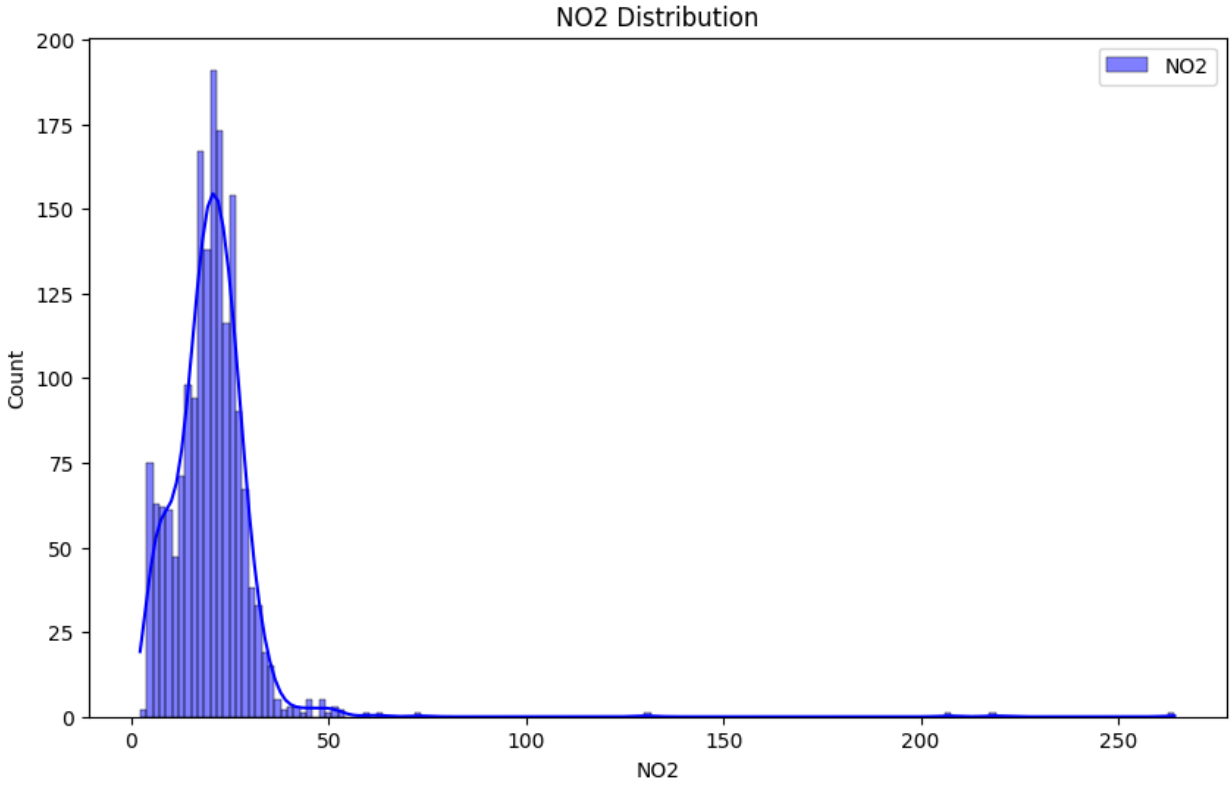
- Scatter plots used to describe the highest rate of No2,SO2,RSPM.
- This would depict the range of NO2,SO2,RSPM/PM10 spread across the different region.

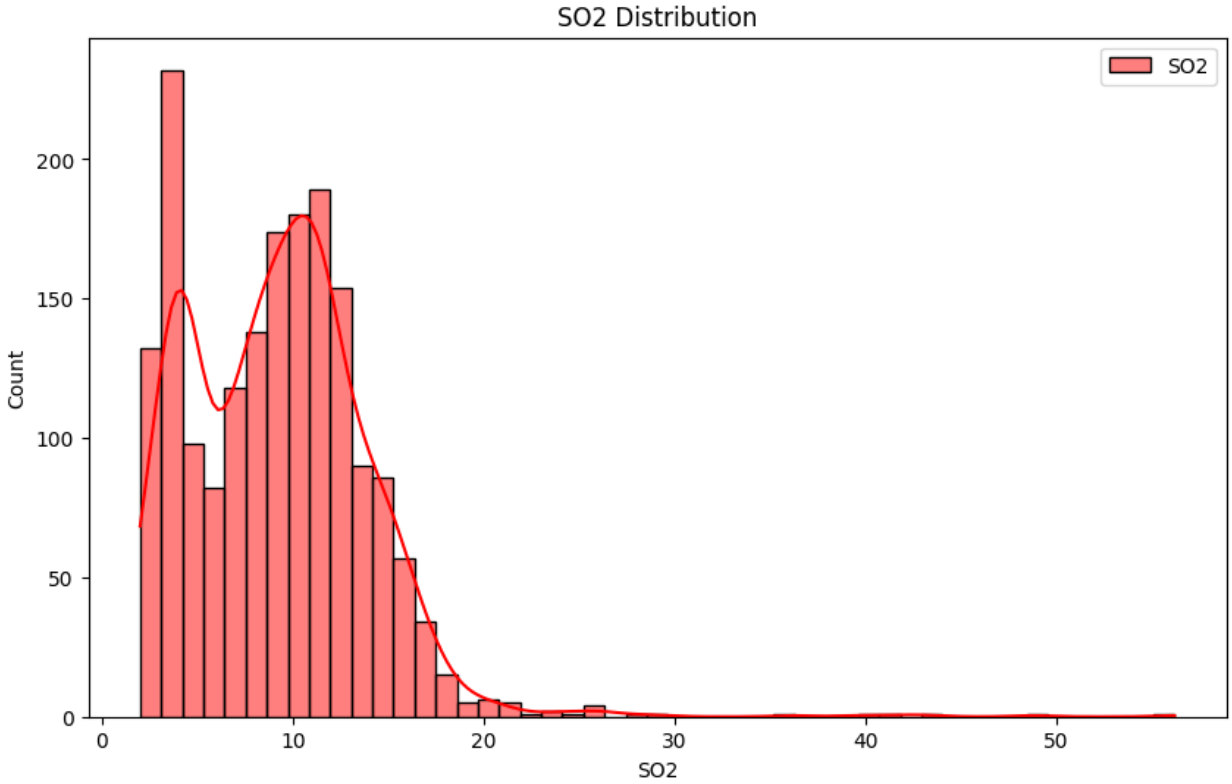


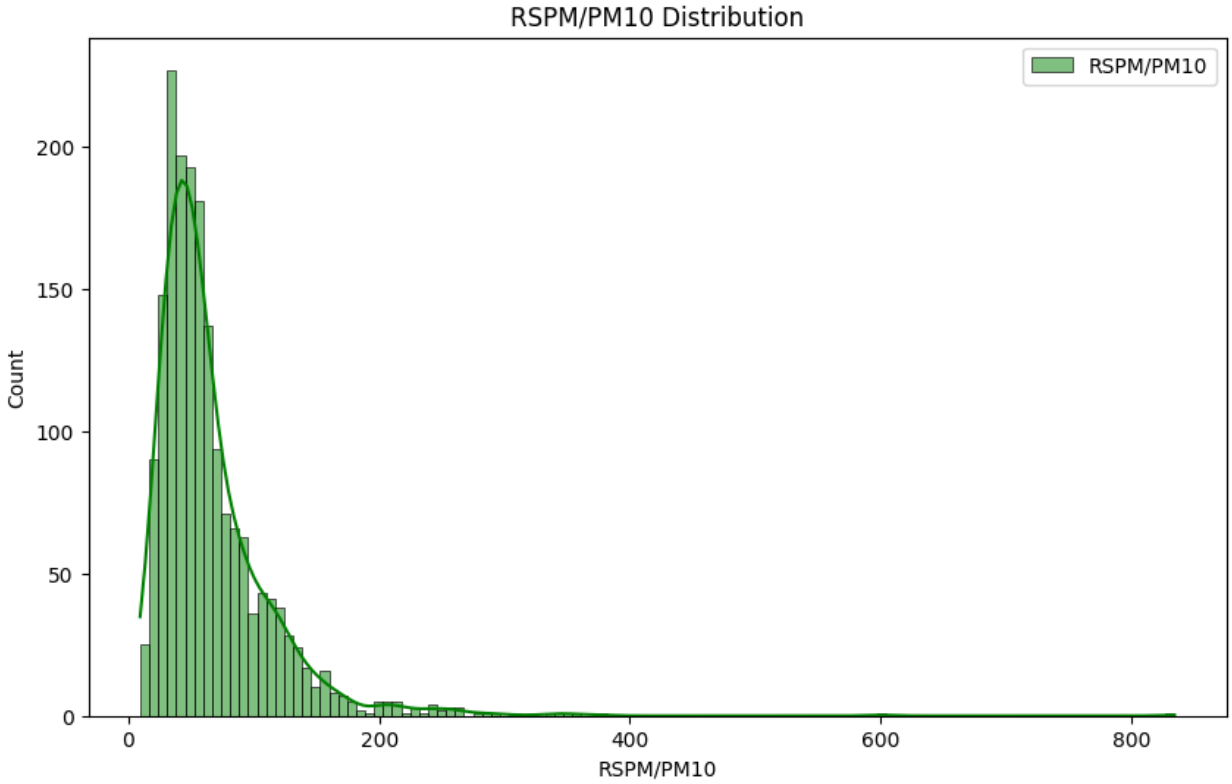


Histogram:

- Histograms display the distribution of continuous data by grouping it into bins or intervals. They are useful for understanding data distribution and identifying outliers.
- The overall percentage of NO2,SO2,RSPM range of the cities, type of Monitoring Station

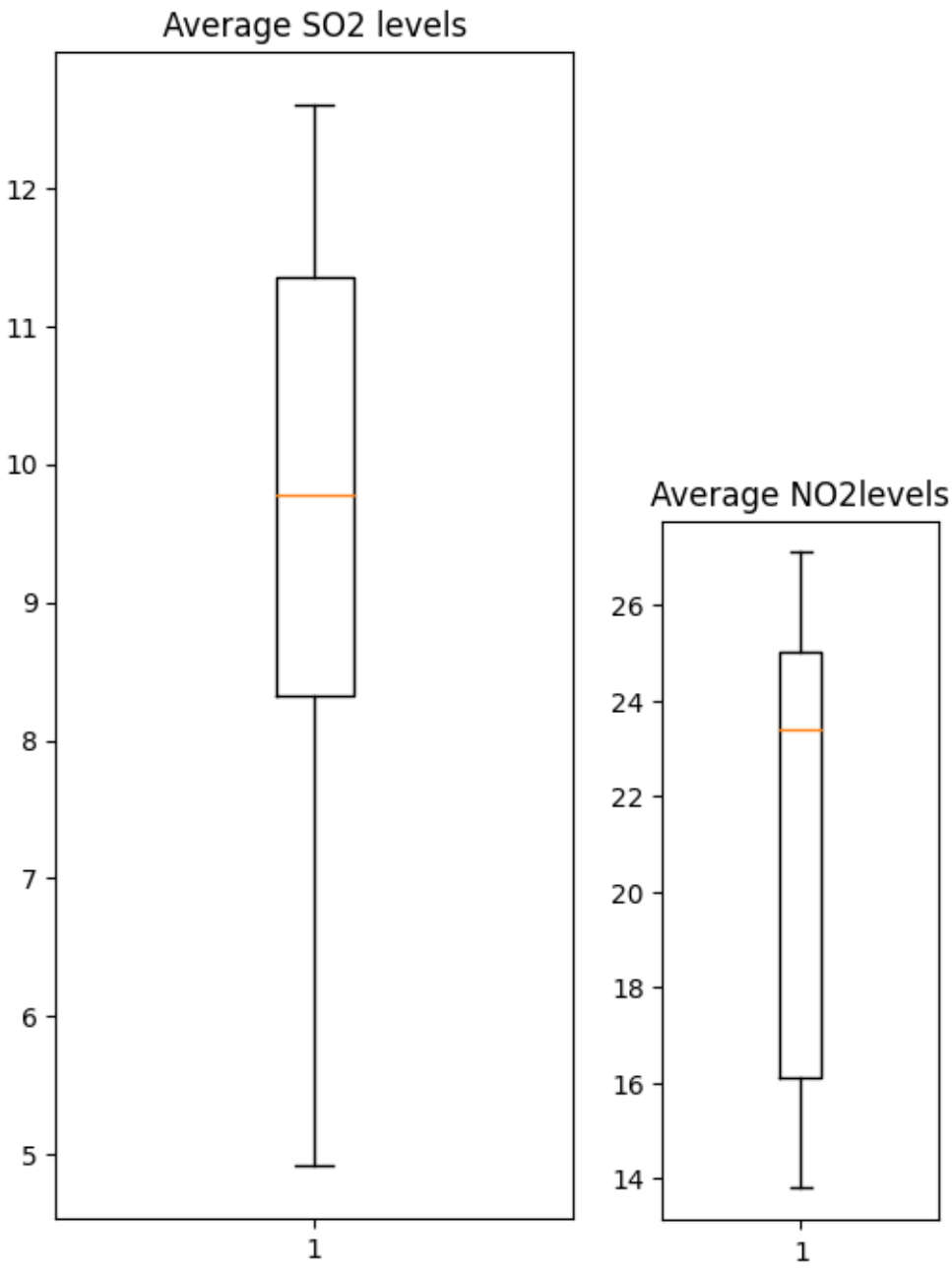

NO2 Distribution
NO2
Count
NO2
0
25
50
75
100
125
150
175
200
0
50
100
150
200
250


SO2 Distribution
SO2
Count
SO2
0
50
100
150
200
0
10
20
30
40
50


RSPM/PM10 Distribution
RSPM/PM10
Count
RSPM/PM10
0
50
100
150
200
0
200
400
600
800

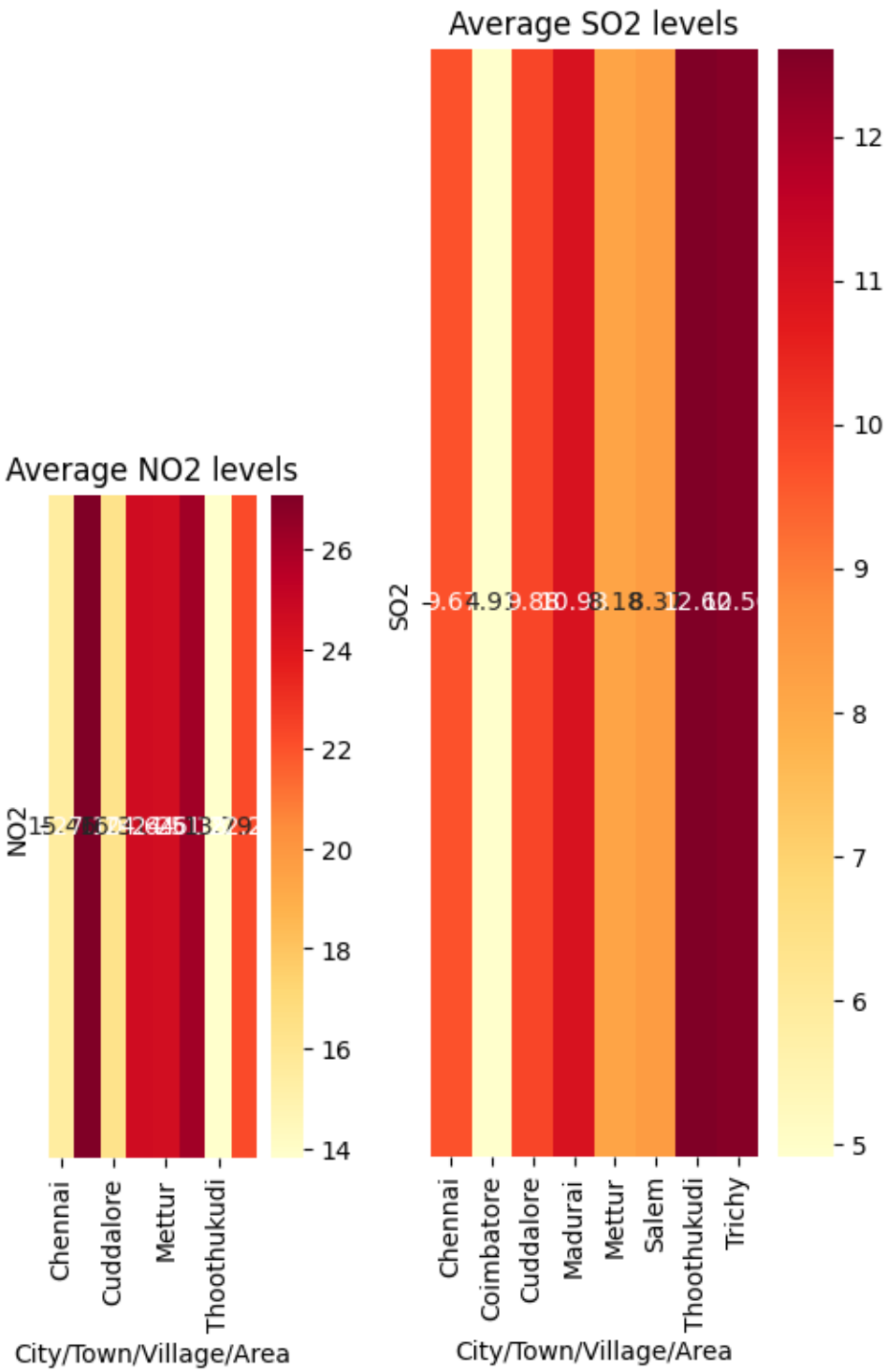
Box Plot (Box-and-Whisker Plot):

- Box plots are great for visualizing the distribution, spread, and skewness of data. They provide information about the median, quartiles, and potential outliers in the data.
- The overall concentration and average value of the NO2,SO2 ,Rspm value of the Spread across the area.


Average SO2 levels
12
11
10
9
8
7
6
5
1
Average NO2levels
26
24
22
20
18
16
14
1

Heat Map:

- Heat maps use color to represent the magnitude of values in a matrix or table. They are often used to show correlations or patterns in large datasets.
- The overall structure of the Heat map the level of concentration of NO2,SO2,RSPM/PM10


Average NO2 levels
NO2
26
24
22
20
18
16
14
Chennai
Cuddalore
Mettur
Thoothukudi
City/Town/Village/Area
Average SO2 levels
SO2
12
11
10
9
8
7
6
5
Chennai
Coimbatore
Cuddalore
Madurai
Mettur
Salem
Thoothukudi
Trichy
City/Town/Village/Area