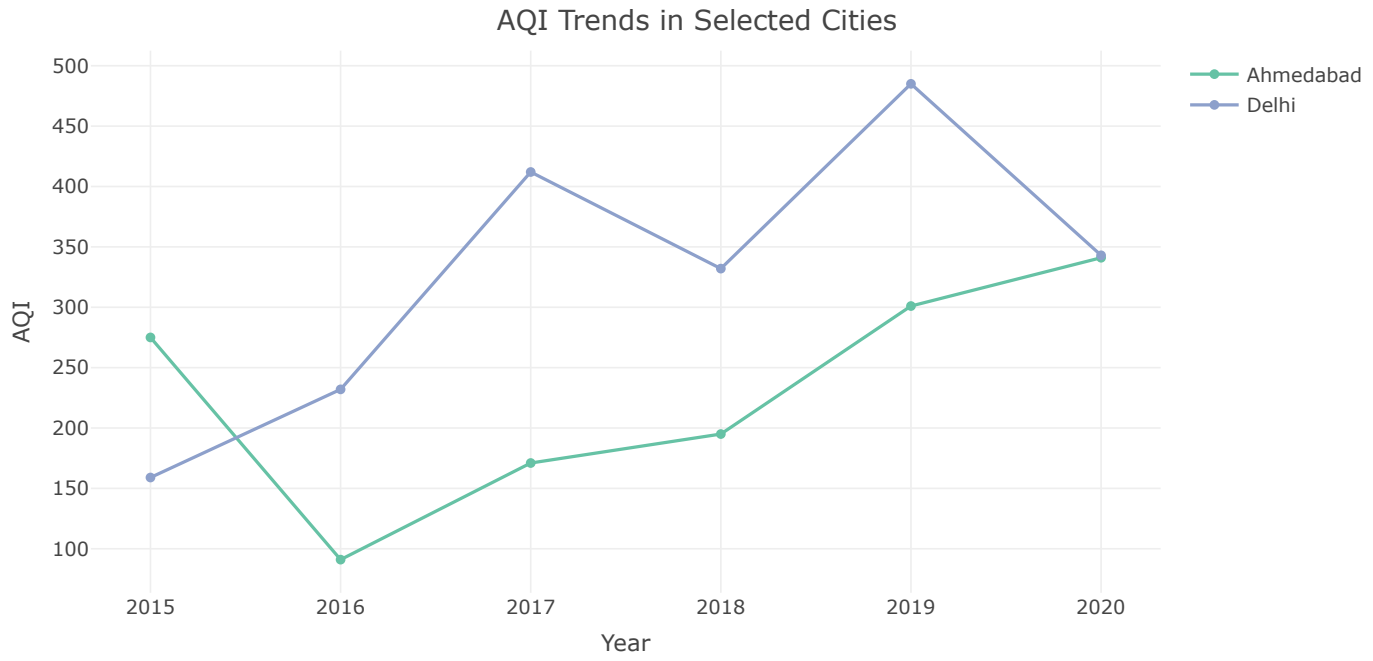
AQI Trends in Selected Cities

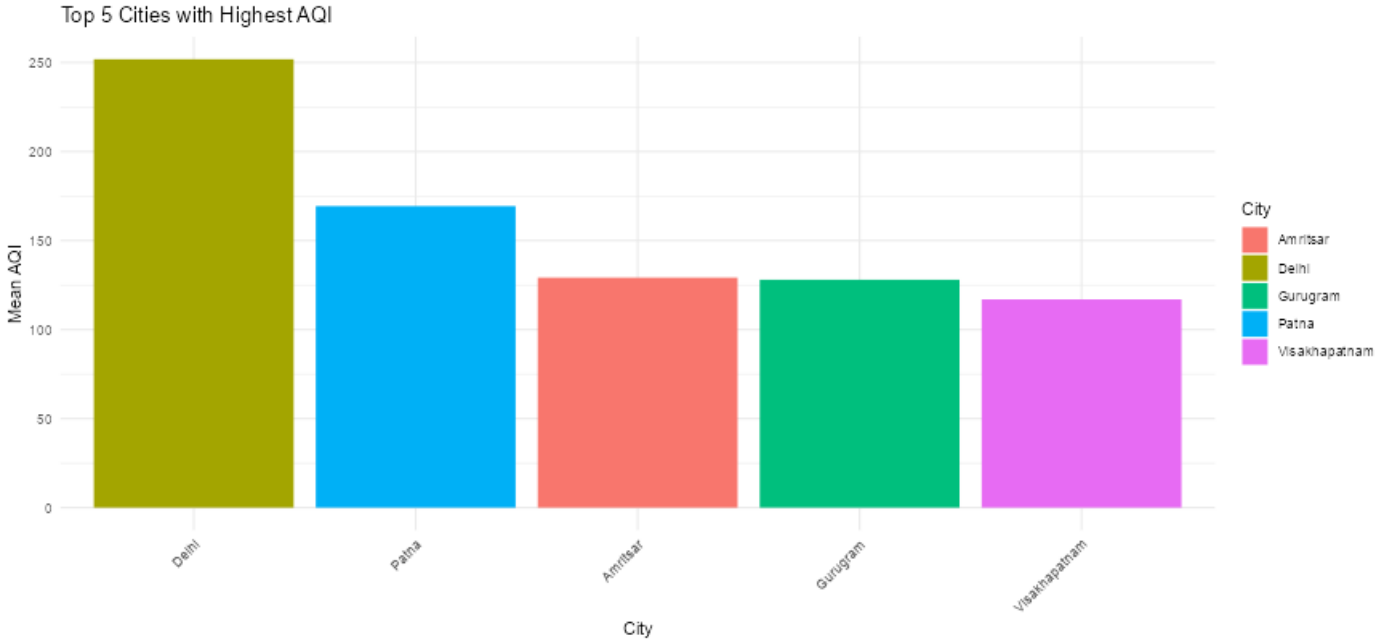
Select Cities:

- [x] Ahmedabad
- [x] Delhi
- [ ] Gurugram
- [ ] Lucknow
- [ ] Patna

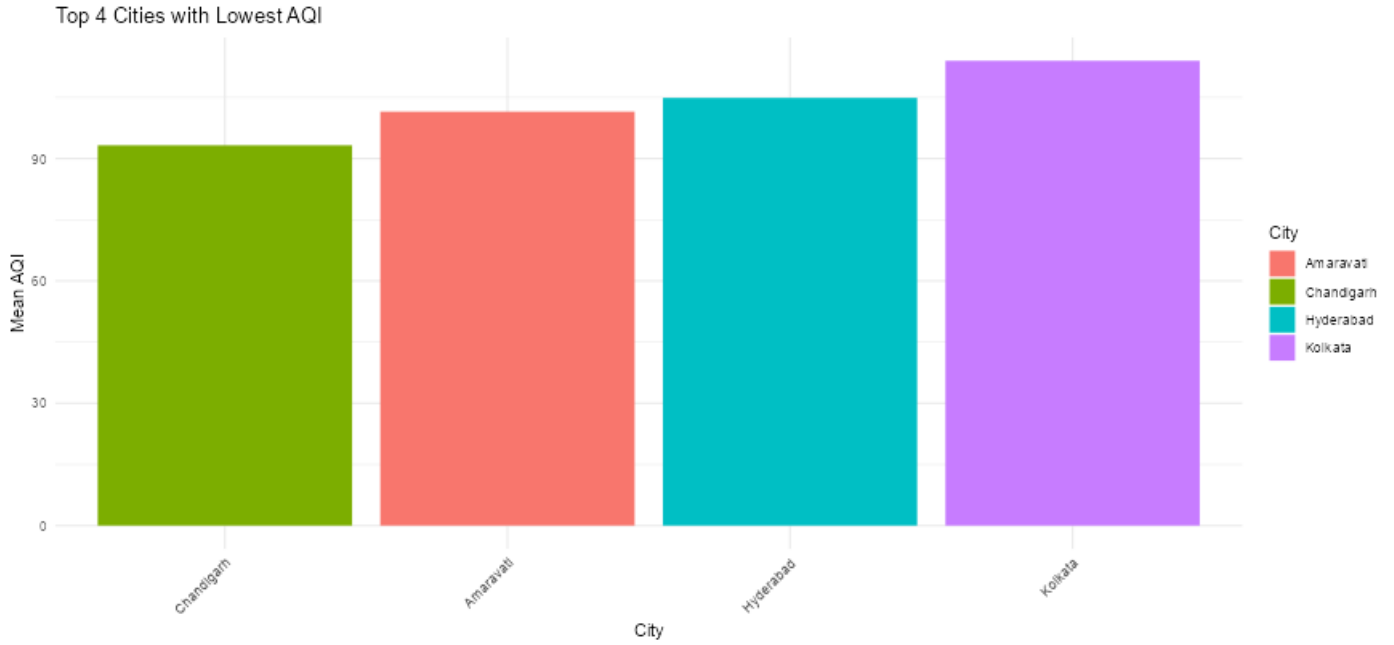
Select Parameter:

AQI

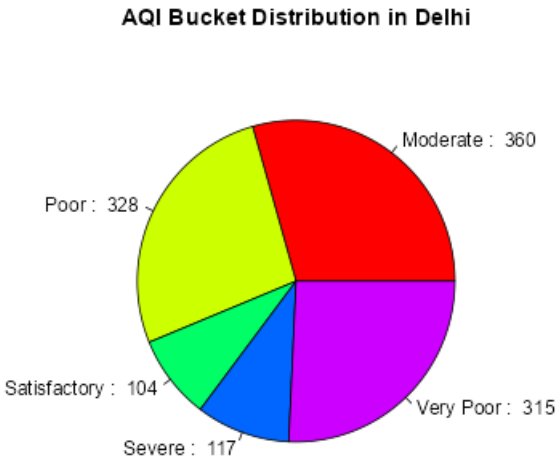




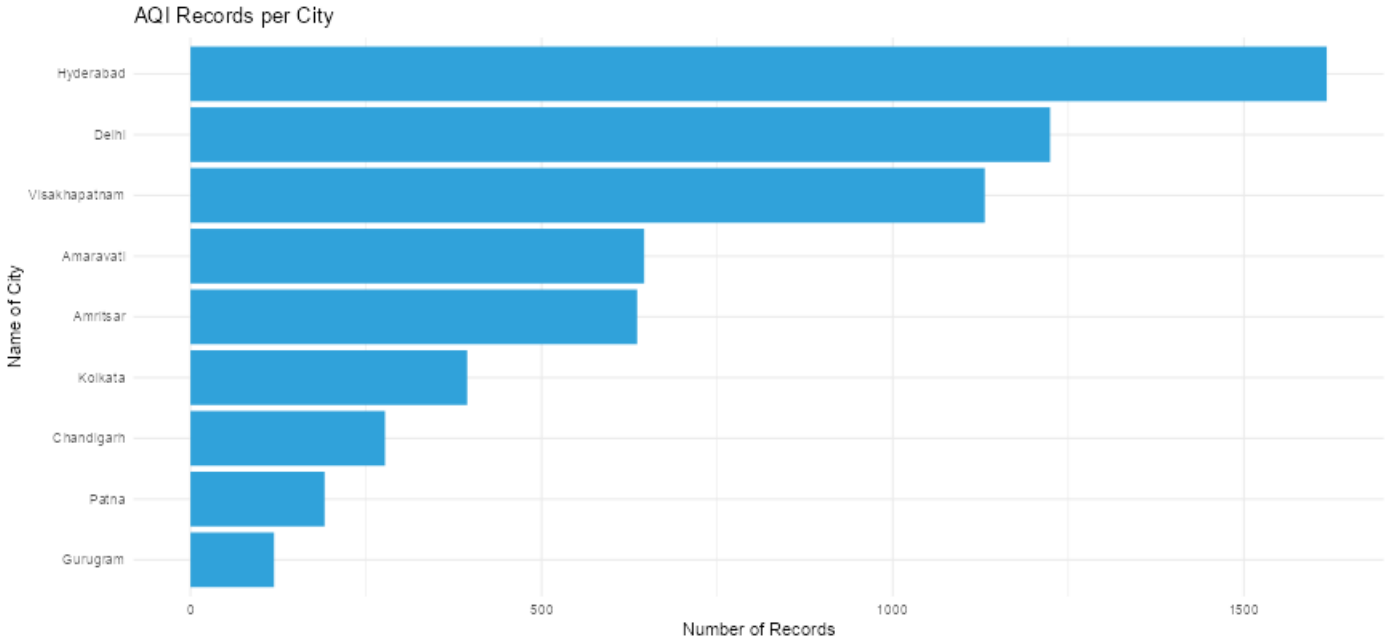
This plot showcases the top 5 cities with the highest AQI levels. Notably, Delhi stands out with the highest mean AQI value, highlighting significant air quality concerns in the region. Following closely is Patna, ranking second-highest in mean AQI, indicating persistent pollution challenges. Interestingly, Vishakhapatnam secures the fifth-highest mean AQI value, signaling varying degrees of air pollution across regions, which can stem from diverse factors like industrial activities, vehicular emissions, and geographical feature.



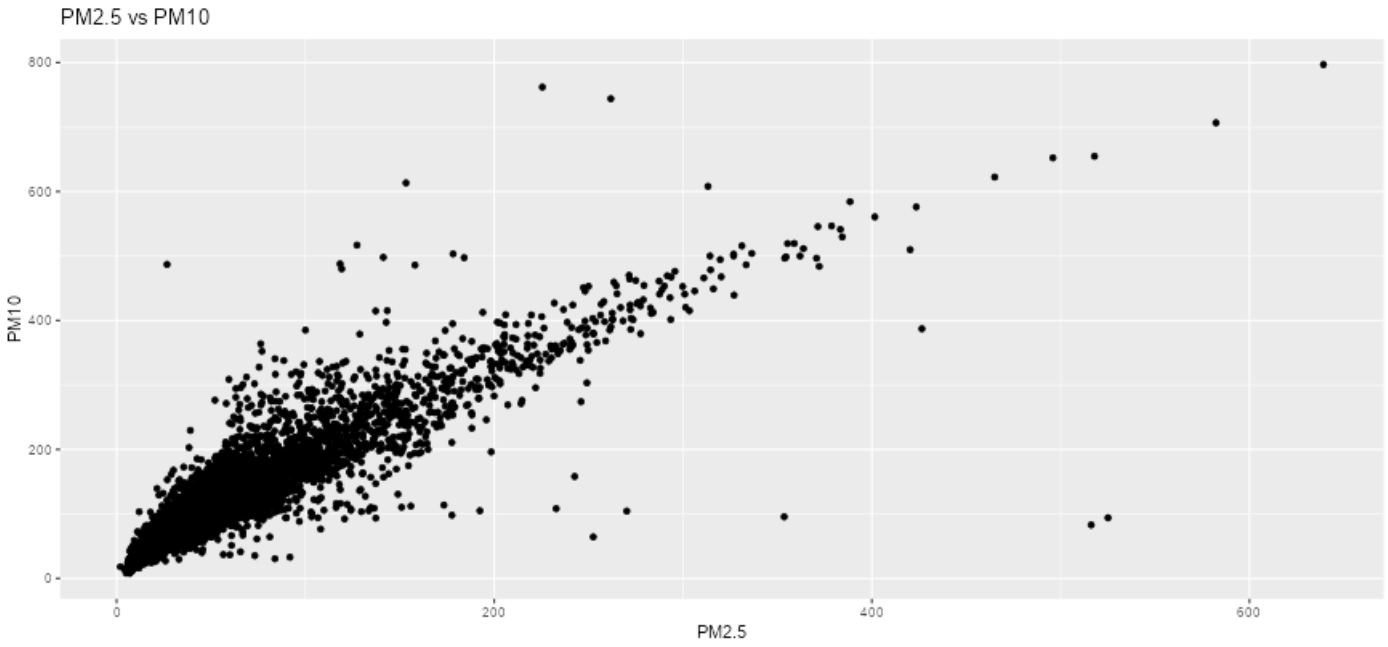
This plot illustrates the top 4 cities with the lowest AQI. Chandigarh, Amaravati, Hyderabad, and Kolkata exhibit the lowest mean AQI values among all cities. Additionally, it's worth noting that these cities consistently demonstrate relatively cleaner air quality compared to others in the dataset.



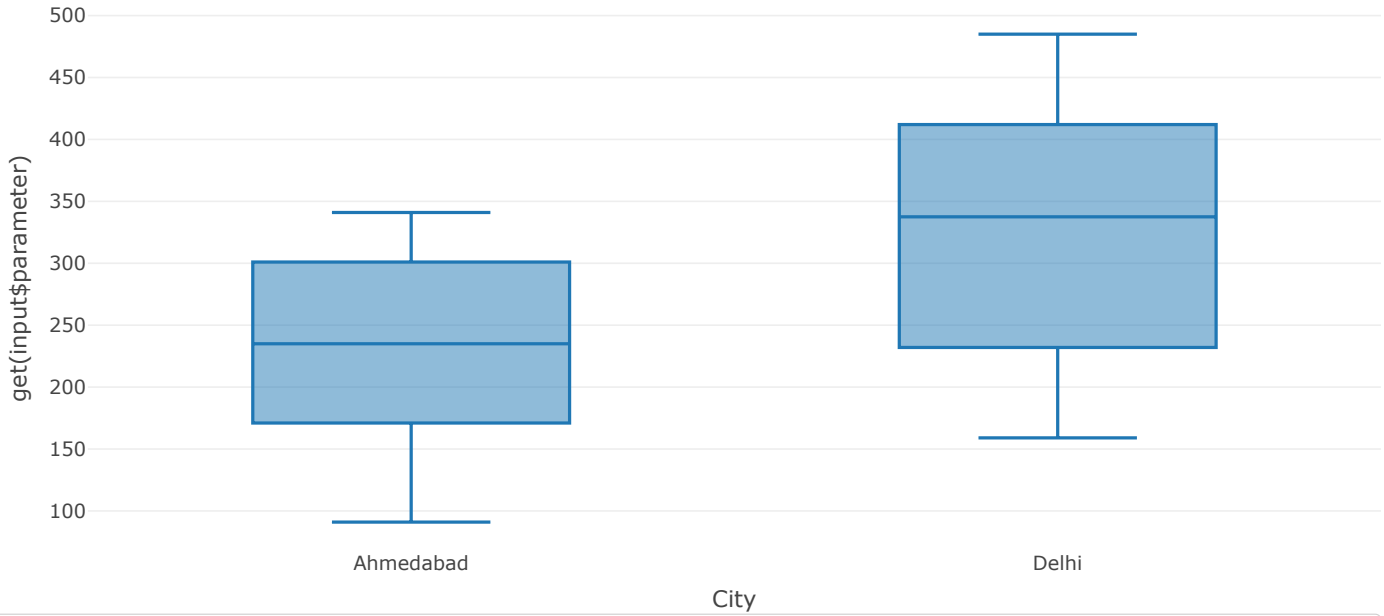
This pie chart visualizes the distribution of AQI buckets in Delhi. The data reveals that out of 924 total days observed, 360 days fall under the moderate category, indicating a moderate level of air pollution. Additionally, 315 days are categorized as very poor, highlighting significant air quality challenges. Furthermore, 328 days are classified as poor, indicating further deterioration in air quality. Moreover, 117 days fall under the severe category, signifying a critical level of pollution that poses health risks. Lastly, 104 days are marked as satisfactory, suggesting relatively cleaner air quality conditions on these days.



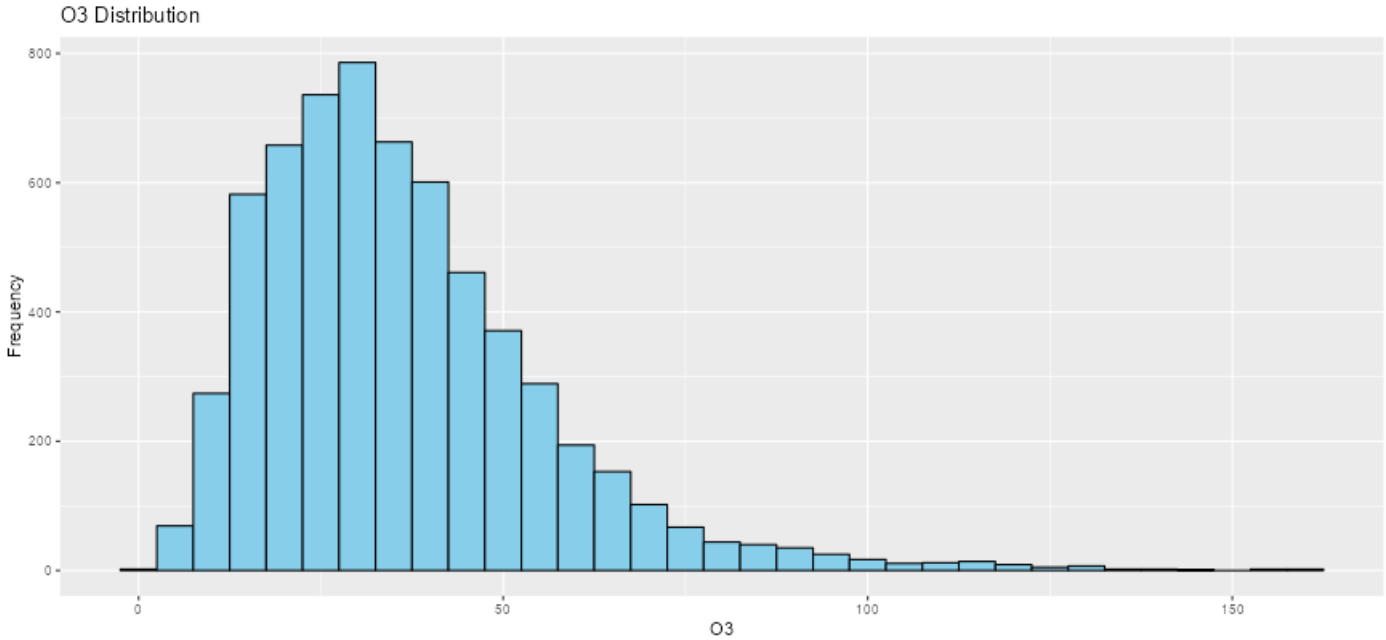
The graph illustrates the number of AQI records per city. Among the cities included in the graph, Hyderabad, Delhi, Vishakhapatnam, Amaravati, Amritsar, Kolkata, Chandigarh, Patna, and Gurugram exhibit the highest number of AQI records, presented in descending order. Notably, Hyderabad emerges as the city with the highest number of records, indicating a significant amount of data available for air quality monitoring in Hyderabad compared to other cities in the dataset.



This scatter plot illustrates the relationship between PM2.5 and PM10 concentrations.
The data suggests a notable interaction between PM2.5 concentrations ranging from 0 to 250 µg/m³ and PM10 concentrations ranging from 0 to 375 µg/m³. This correlation hints at potential sources or factors influencing particulate matter concentrations within this range, such as combustion processes, industrial emissions, or local environmental conditions.



This box plot visualizes the distribution of the selected parameter AQI across the selected cities. Outliers, if present, can be observed outside the whiskers extending from the box. Analyzing the box plot can provide insights into the variability and spread of the parameter values among the selected cities.



This histogram depicts the distribution of O3 (Ozone) levels. The data indicates that O3 levels ranging from 0 to 50 ppb (parts per billion) are prevalent, with a higher frequency observed in this range. Conversely, O3 levels between 50 to 100 ppb exhibit a comparatively lower occurrence, suggesting a reduction in concentration. Furthermore, O3 levels ranging from 100 to 150 ppb are notably scarce, indicating minimal occurrences within this concentration range.