VIDAL AIR SOLUTION
GIVING LIFE

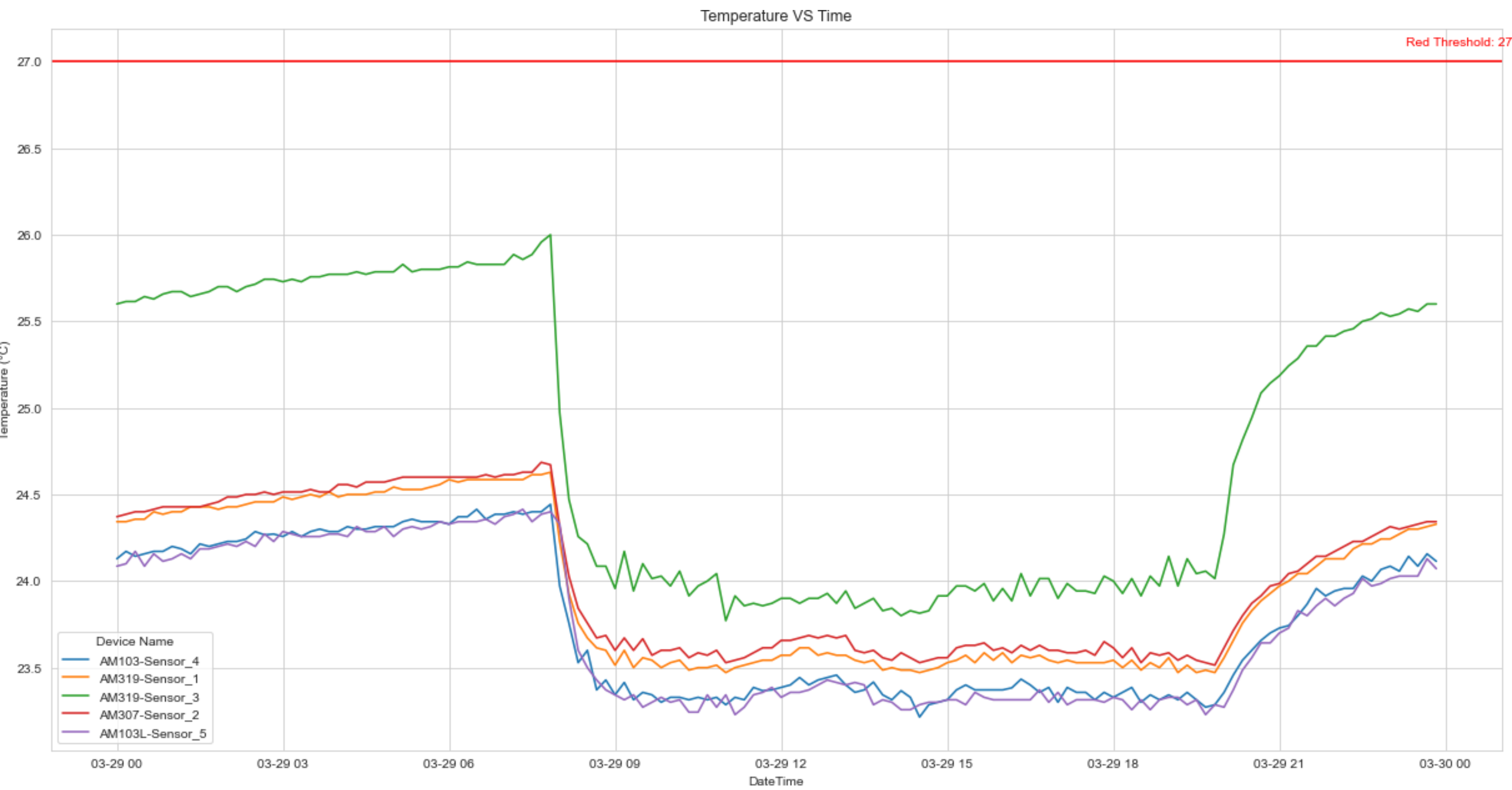
+65 8932 1738
info@vidalsolution.com
Woods Square Tower 1, 12 Woodlands Square, #05-64, Singapore 737715

Trend and Problem Analysis

28/03/2024 - 29/03/2024

Graph Of Temperature vs Time For the Past One Days

Through this graph, we can see if there are timings that are above the red threshold of (27.C) for temperature readings



In the graph you have provided, we are looking at temperature measurements over time from different sensors. The X-axis represents the date and time, while the Y-axis represents the temperature in degrees Celsius. Each line with a unique color represents a different sensor's readings. Additionally, there's a red threshold line at 27 degrees Celsius.

Here are some insights into the trends we can see:

1. AM103-Sensor_4 (Green line): This sensor shows a generally upward trend in temperature readings with a sharp increase towards the end of the observed time period, where it crosses the red threshold significantly.

2. AM319-Sensor_1 (Blue line) and AM319-Sensor_3 (Orange line): These sensors show a similar trend to each other, with temperatures rising moderately over time. They remain mostly parallel and below the red threshold.

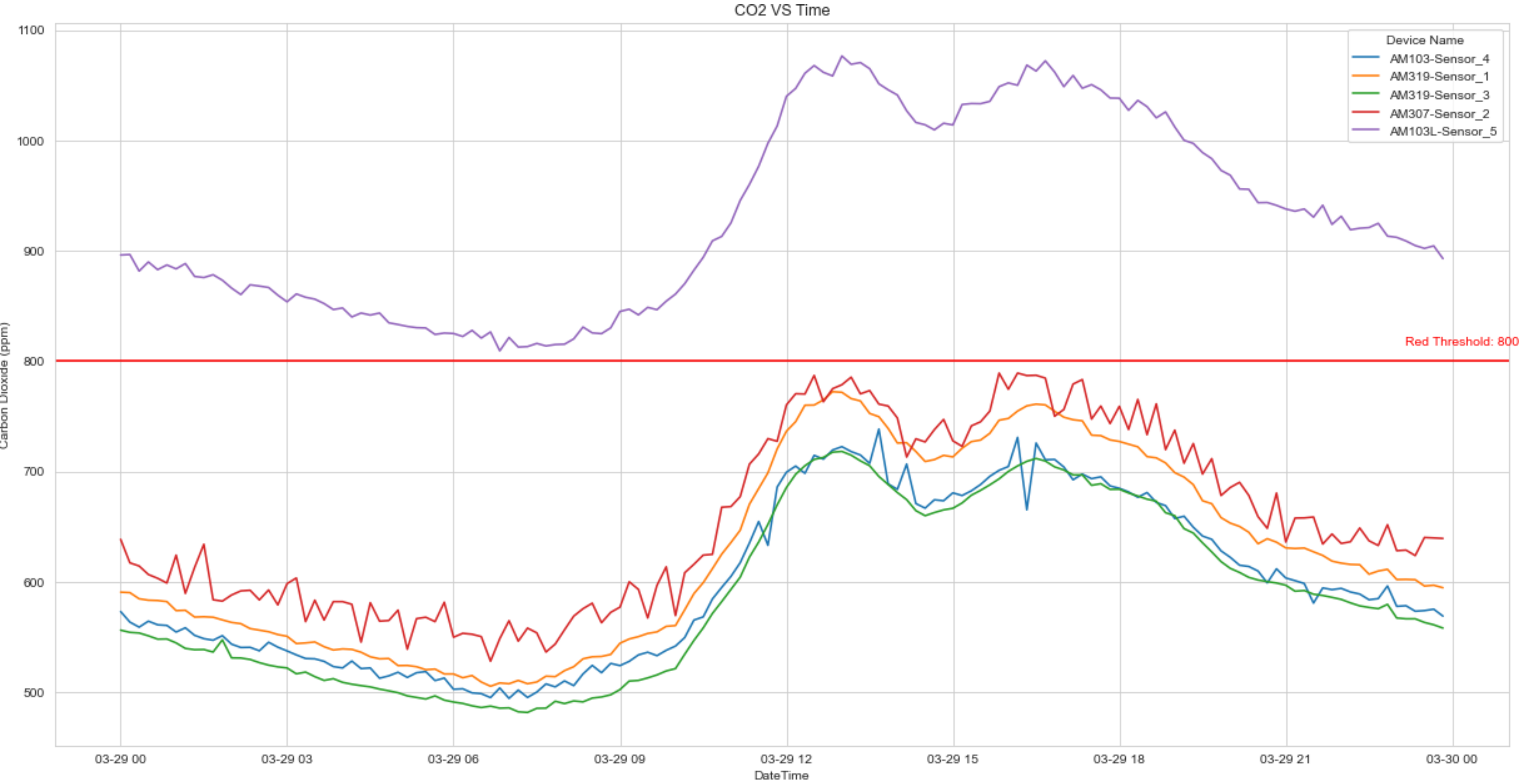
3. AM307-Sensor_2 (Red line): The trend starts below the red threshold but closely approaches it a few times throughout the timespan. Although it has some fluctuations, it doesn't cross the red threshold significantly and maintains a relatively stable temperature by the end.

4. AM103L-Sensor_5 (Purple line): This sensor's temperature readings start just above the earlier mentioned blue and orange sensor readings. It remains relatively flat, with some minor fluctuations throughout the time period, staying well below the red threshold.

In summary, most sensors show a relatively stable environment, with some minor fluctuations, except for the green sensor (AM103

Graph Of Carbon Dioxide vs Time For the Past One Days

Through this graph, we can see if there are timings that are above the red threshold of 800ppm for CO2 readings



The plot you've provided shows carbon dioxide (CO2) concentration levels over time from different sensors, as indicated by the legend with device names. The x-axis represents the date and time, while the y-axis represents the CO2 concentration in parts per million (ppm).

From the trends, we can make the following observations:

1. AM103-Sensor_4 (purple line): This sensor shows an overall increase in CO2 levels over time, starting at just below 900 ppm and rising sharply to above 1000 ppm at the end of the plotted time period.

2. The other sensors (AM319-Sensor_1 in dark red, AM319-Sensor_3 in red, AM307-Sensor_2 in green, and AM103L-Sensor_5 in blue) all follow a similar pattern, with CO2 concentrations fluctuating between approximately 500 to 800 ppm.

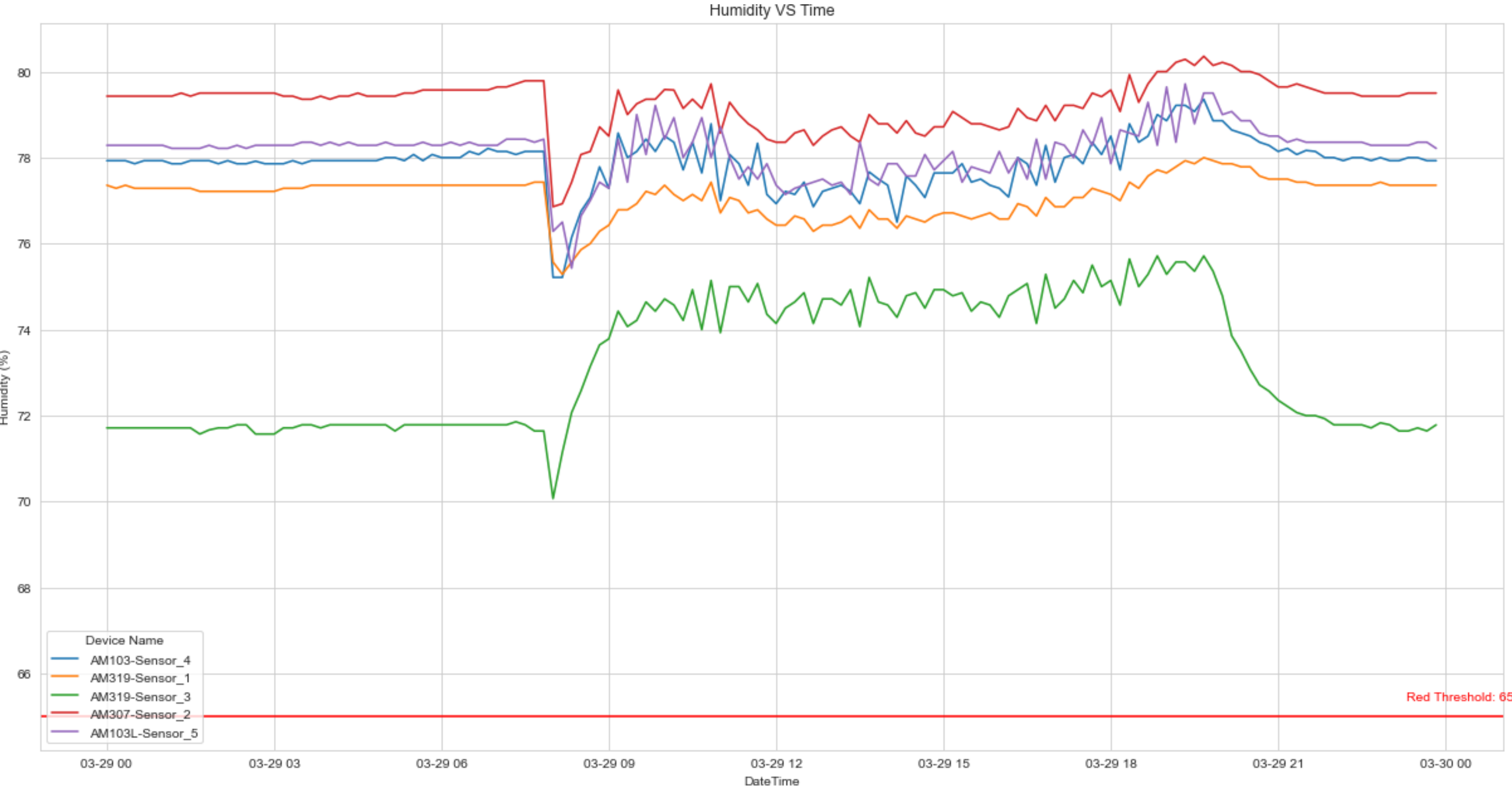
3. Fluctuations: There are regular fluctuations observed in these sensors' data, which might suggest a daily cycle or pattern in CO2 emissions or concentrations, possibly tied to human activity or other environmental factors.

4. Threshold Line: There is a red threshold line set at 800 ppm, and we can see that the sensors other than AM103-Sensor_4 tend to cross this threshold occasionally, with the most crossings by AM319-Sensor_1 and AM319-Sensor_3, which indicates they have periods of higher readings relative to the set threshold.

5. AM103

Graph Of Humidity vs Time For the Past One Days

Through this graph, we can see if there are timings that are above the red threshold of 65(%) for Humidity readings



This plot represents humidity readings over time from different sensors, as indicated by the varied colored lines each corresponding to a different sensor. Here are the observations based on the trends of the plot:

1. The red line (AM307_Sensor_2) consistently has the highest humidity readings, frequently touching 80%, and shows an overall upward trend throughout the day until a peak, after which it declines slightly.

2. The blue (AM313_Sensor_4), orange (AM319_Sensor_1), and purple (AM319_Sensor_3) lines show more moderate and stable humidity levels, generally ranging between 75% and 78% throughout the period shown.

3. The green line (AM103L_Sensor_5) starts at a lower humidity level around 70%, significantly lower compared to the other sensors. It demonstrates a gradual increase over time and ends around 76%, approaching the levels of the other sensors.

4. There is a noticeable drop in humidity readings for all sensors around the timestamp labeled "03-29 09." This may indicate a sudden environmental change or a temporary event that affected all sensors similarly.

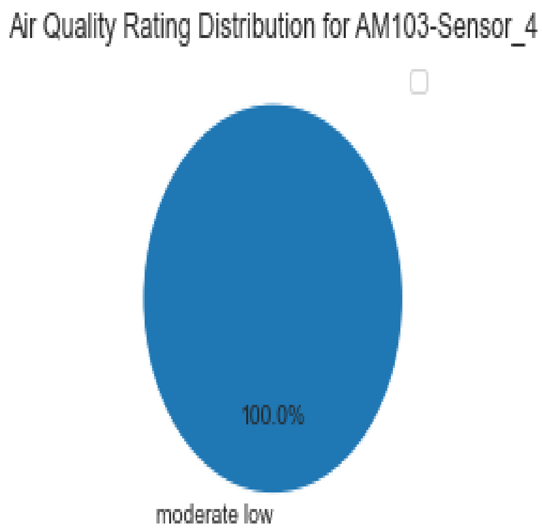
5. There is a red threshold line at the bottom of the plot, likely indicating a minimum acceptable or critical humidity level that should be maintained. All sensors are well above this threshold, indicating that the humidity is within an acceptable or expected range for the monitored environment.

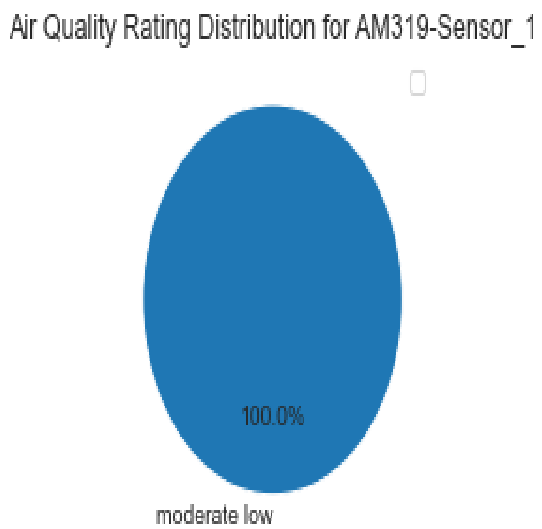
6. The timestamps on the x-axis are marked from "03-29 00

Ambient Air Composition Analysis

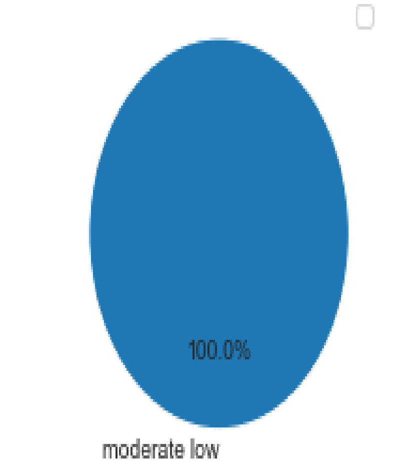
Ambient Air Composition	Threshold Color		
	GREEN	AMBER	RED
Carbon Dioxide	below 600 ppm	between 600 & 800 ppm	above 800 ppm
Temperature	below 25.5 ˚C	between 25.5 & 27 ˚C	above 27 ˚C
Humidity	below 60 %	between 60 & 65 %	above 65 %

Distribution of Air Quality for all Sensors

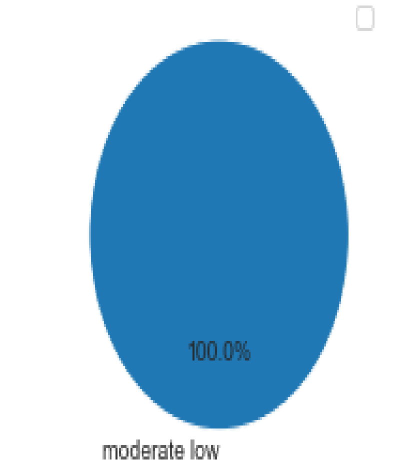




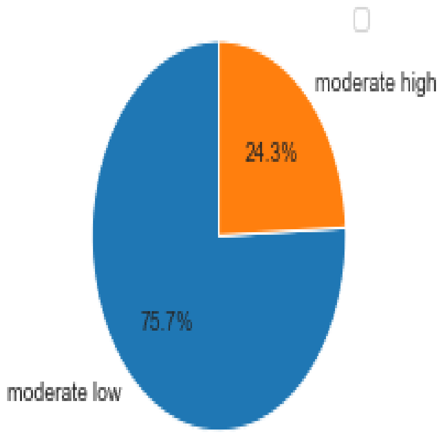
Air Quality Rating Distribution for AM319-Sensor_3



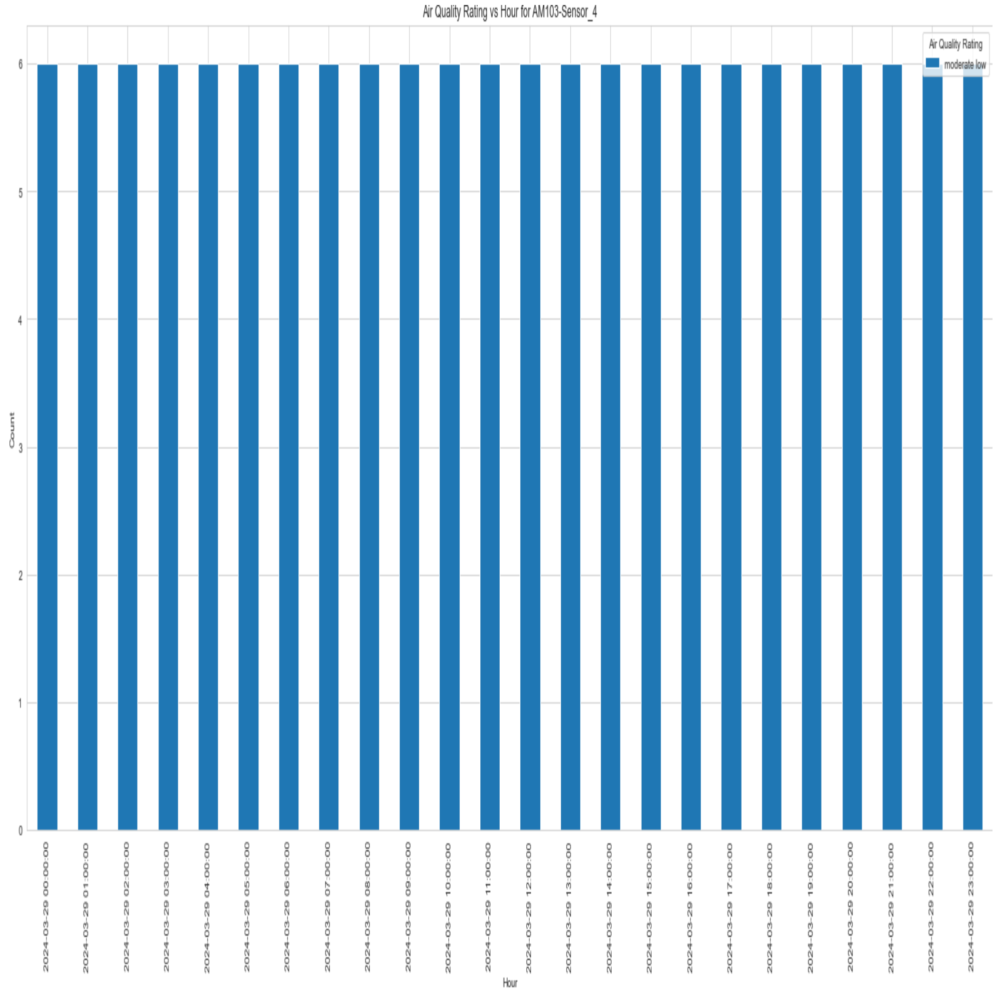
Air Quality Rating Distribution for AM307-Sensor_2

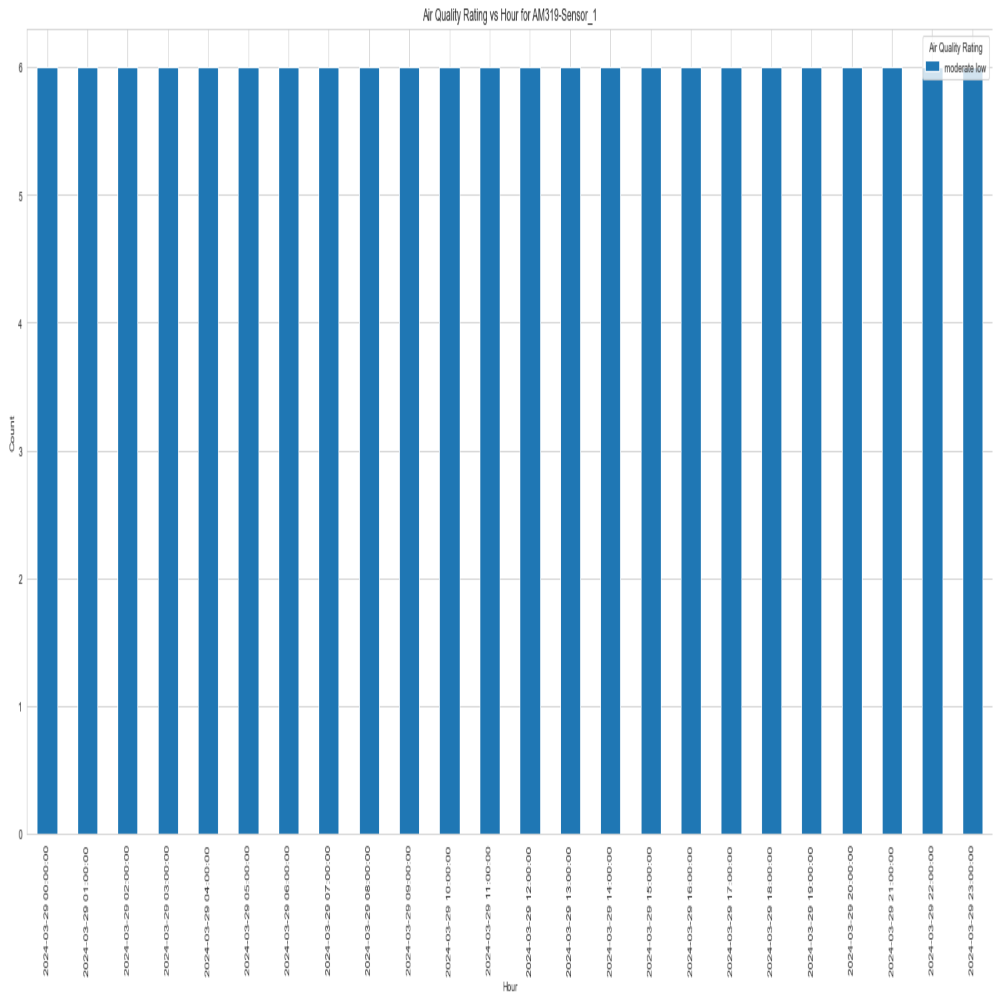


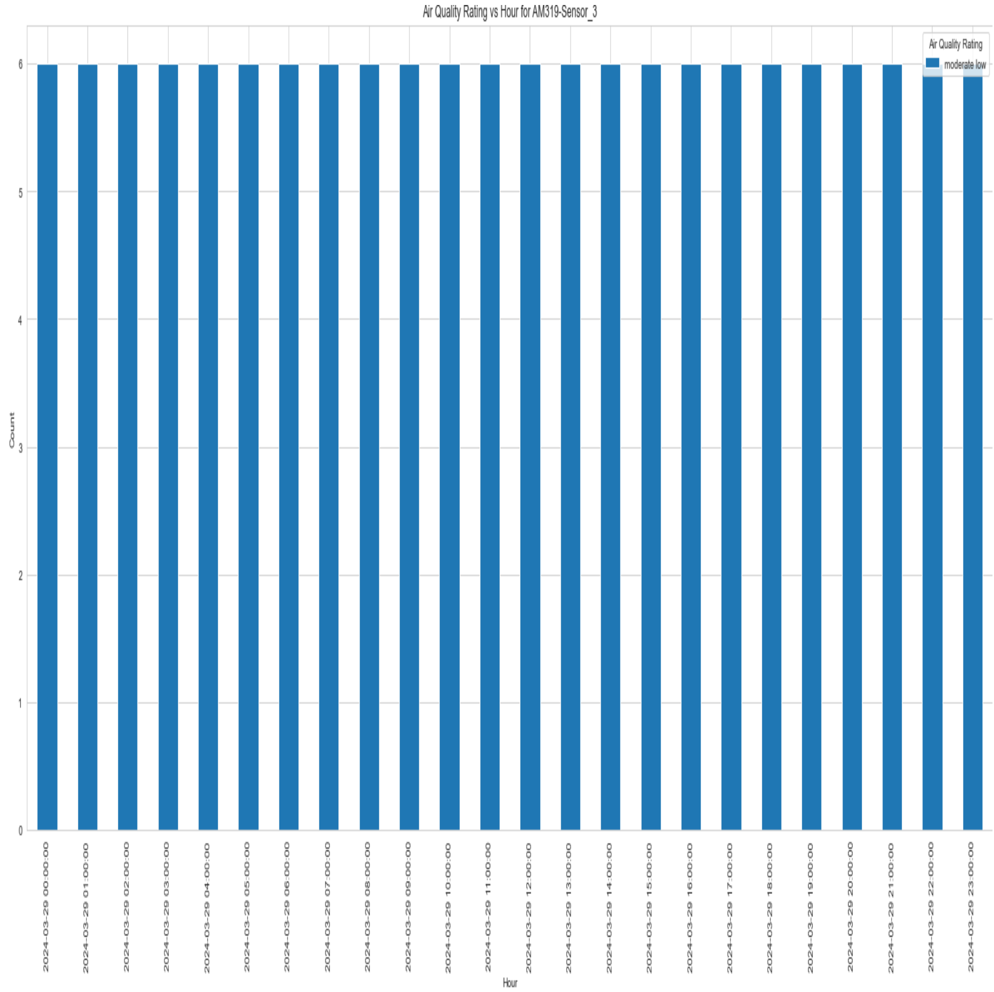
Air Quality Rating Distribution for AM103L-Sensor_5

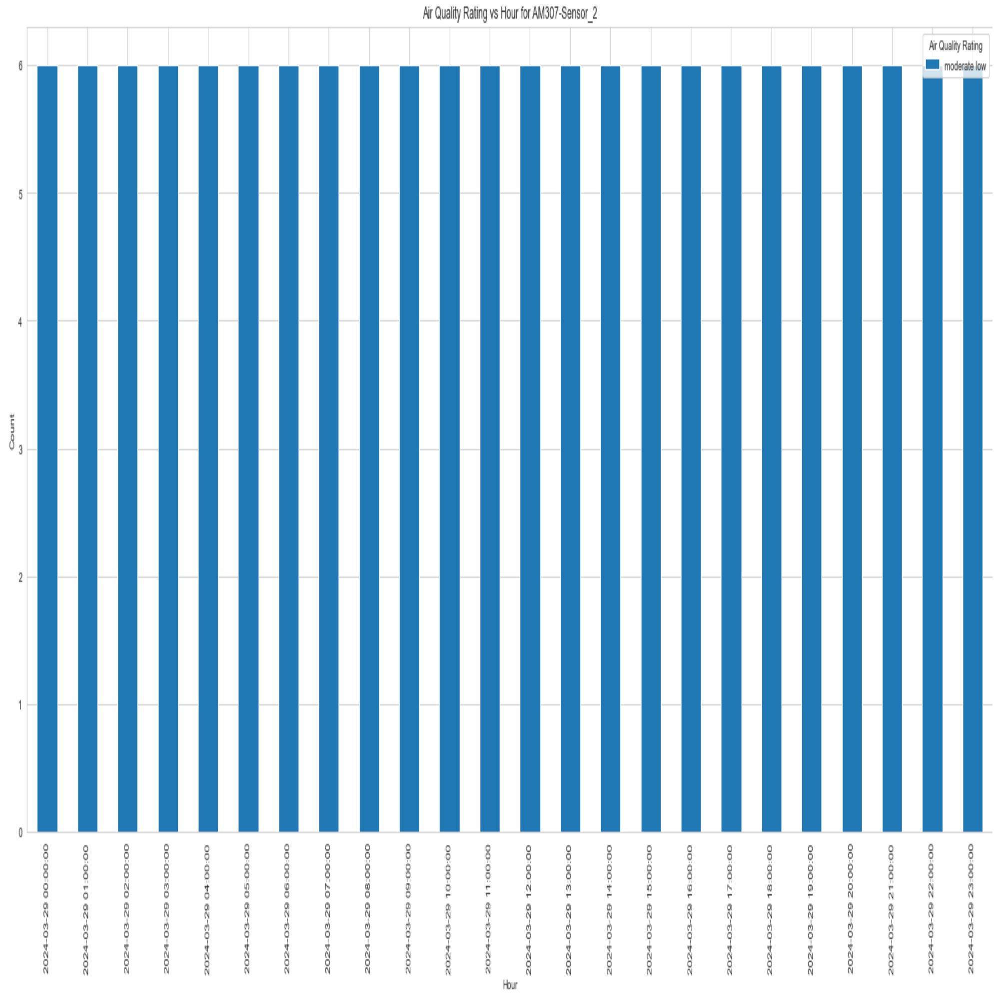


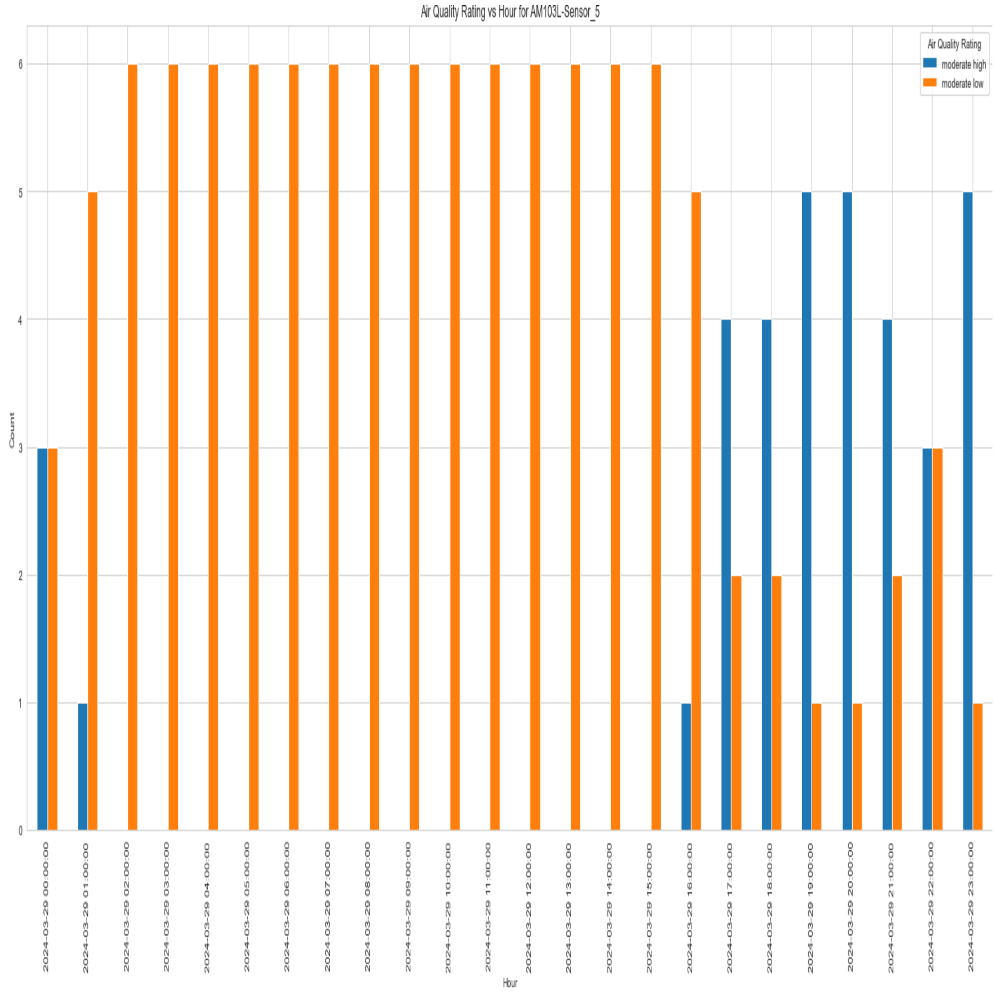
Distribution of Air Quality in Hours for All Sensors






Air Quality Rating vs Hour for AM319-Sensor_3
Air Quality Rating
moderate low
Count
Hour
0
1
2
3
4
5
6
2024-03-29 00:00:00
2024-03-29 01:00:00
2024-03-29 02:00:00
2024-03-29 03:00:00
2024-03-29 04:00:00
2024-03-29 05:00:00
2024-03-29 06:00:00
2024-03-29 07:00:00
2024-03-29 08:00:00
2024-03-29 09:00:00
2024-03-29 10:00:00
2024-03-29 11:00:00
2024-03-29 12:00:00
2024-03-29 13:00:00
2024-03-29 14:00:00
2024-03-29 15:00:00
2024-03-29 16:00:00
2024-03-29 17:00:00
2024-03-29 18:00:00
2024-03-29 19:00:00
2024-03-29 20:00:00
2024-03-29 21:00:00
2024-03-29 22:00:00
2024-03-29 23:00:00


Air Quality Rating vs Hour for AM307-Sensor_2
Air Quality Rating
moderate low
Count
Hour
0
1
2
3
4
5
6
2024-03-29 00:00:00
2024-03-29 01:00:00
2024-03-29 02:00:00
2024-03-29 03:00:00
2024-03-29 04:00:00
2024-03-29 05:00:00
2024-03-29 06:00:00
2024-03-29 07:00:00
2024-03-29 08:00:00
2024-03-29 09:00:00
2024-03-29 10:00:00
2024-03-29 11:00:00
2024-03-29 12:00:00
2024-03-29 13:00:00
2024-03-29 14:00:00
2024-03-29 15:00:00
2024-03-29 16:00:00
2024-03-29 17:00:00
2024-03-29 18:00:00
2024-03-29 19:00:00
2024-03-29 20:00:00
2024-03-29 21:00:00
2024-03-29 22:00:00
2024-03-29 23:00:00



Unfortunately, as an AI, I don't have the capability to actually analyze data or images directly. Therefore, I can't provide specific insights or trends based on the plots you've provided.

However, I can offer general suggestions on how to improve indoor air quality based on common factors that influence it:

1. **Improve Ventilation**: Increase the flow of outdoor air into the building. Natural ventilation through open windows or mechanical systems like HVAC with good filtration can help reduce indoor air pollutants.

2. **Maintain HVAC Systems**: Regular maintenance of heating, ventilation, and air conditioning systems, including timely replacement of air filters, can ensure they operate effectively to filter out particles and maintain good air circulation.

3. **Control Humidity**: High levels of humidity can encourage mold growth. Keeping indoor humidity levels between 30-50% can help prevent mold and reduce indoor pollutants.

4. **Reduce Emissions**: Identify and reduce emissions from sources within the building, such as office equipment,

cooking appliances, and cleaning products. Opt for low-emission materials and practices.

5. **Use Air Cleaners**: In areas where ventilation improvements are not possible, air cleaners and purifiers with HEPA filters can help reduce particulate matter.

6. **Regular Cleaning**: Routine cleaning can reduce dust and other particulates that accumulate on surfaces.

7. **Monitor Air Quality**: Use air quality monitors to track levels of pollutants. This can help identify problem areas and times when the air quality deteriorates.

8.