Subject: Analyzing Air Quality Data: Dataset and Activity Details

Dear Participants,

Attached is the dataset titled *"Air Quality Data"*, which provides daily air quality metrics from various Indian cities. The goal of this activity is to analyze the dataset, uncover meaningful insights, and propose actionable solutions to address air quality concerns.

Problem Statement

"Exploring Air Quality Data for Insights and Innovation"

Overview

Air quality is a critical global concern. This dataset captures pollutant levels, AQI values, and their categories across cities over time. Participants are encouraged to explore the dataset creatively, derive insights, and propose impactful solutions to improve air quality.

Your Tasks

1. Explore the Dataset

- Understand the dataset's structure and contents.
- Analyze variations in air quality across cities, seasons, and time periods.
- Identify patterns, trends, and relationships between pollutants and AQI.

2. Derive Insights

- Identify the pollutants most responsible for poor air quality.
- Highlight differences in air quality across regions and timeframes.

3. Create Visualizations

- Develop visualizations to illustrate trends and variations in air quality.
- Clearly highlight key findings using graphs and charts.

4. Provide Recommendations

- Propose actionable measures to improve air quality based on your findings.
- Suggest region-specific interventions to address pollution effectively.

Encouragement for Innovation

The tasks outlined above serve as a starting point, but participants are encouraged to think beyond the basics. Whether it's building predictive models, forecasting AQI trends, or creating interactive tools, your creativity and unique perspectives will add significant value.

Submission Requirements

1. **Report**:
    - Summarize your findings, insights, and recommendations in a concise report.
    - Include a description of your methodology and key observations.
2. **Visualizations**:
    - Submit all relevant graphs, charts, or dashboards created to support your analysis.
3. **Code**:
    - Share clean and well-documented code, if used for the analysis.
4. **Presentation**:
    - Prepare a slide deck (5-8 slides) summarizing your analysis and recommendations.

Evaluation Criteria

1. **Insight Generation and Analysis (30%)**:
    - The depth and quality of your observations and findings.
2. **Visualization (20%)**:
    - Creativity, clarity, and relevance of visualizations in communicating insights.
3. **Recommendations (10%)**:
    - Practicality and potential impact of your proposed solutions.
4. **Presentation and Communication (40%)**:
    - The clarity, structure, and effectiveness of your report and slides.

Important Information

- **Submission Deadline**: **3rd December 2024, 3:59 PM IST**
- **Submission Platform:** All submissions are to be made on **Unstop**.

We look forward to your participation and unique approaches to analyzing and solving air quality challenges. If you have any questions, feel free to reach out.