

# Climate Change Analysis — Final Report

## 1) Basic Details

- Name: Vaibhav Parmar
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- Institution: Atmiya University
- Project Title: Climate Change Analysis
- Tech Stack: Python, Pandas, Matplotlib

## 2) Dataset

- Rows after cleaning: 522 (removed duplicates: 0)
- Time range: 2020–2023

## 3) What I Did

- Loaded the CSV and standardized column names.
- Removed exact duplicates and trimmed text fields.
- Identified a time column (if present) and computed yearly averages for numeric metrics.
- Plotted simple line charts with a 5-year rolling mean for smooth trends.
- Exported helper tables (yearly means and correlations).

## 4) Insights

- Metrics analyzed: Likescount, Commentscount.
- Likescount increased from 2020 (2.53) to 2023 (4.58).
- Commentscount increased from 2020 (7.28) to 2023 (11.87).
- Strongest yearly correlation observed between likescount and commentscount ( $\text{corr} \approx 0.28$ ).

## 5) Challenges

Some date values had timezone info and some numeric fields were text-formatted; these were normalized safely. Minor missing values were handled without removing useful data.

## 6) Conclusion

The analysis summarizes how the dataset's key metrics change over time. The figures and tables make trends easy to explain clearly in a short presentation.

## 7) How to Run

- Open and run: Climate\_Change\_EDA\_SubmitReady.ipynb
- Check outputs in: outputs\_climate\_submit/