K.R. MANGALAM UNIVERSITY

THE COMPLETE WORLD OF EDUCATION

Weather Data Analysis Report

Programming for Problem Solving Using Python

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Section : B

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1. **Introduction**

This project analyzes real-world weather data using Python to extract meaningful insights. The dataset contains daily weather readings including date, mean temperature, humidity, wind speed, and air pressure. The goal is to clean, visualize, and summarize weather trends using data science tools.

2.Statistical Summary

Mean Temperature: 21.71

°C Maximum Humidity:

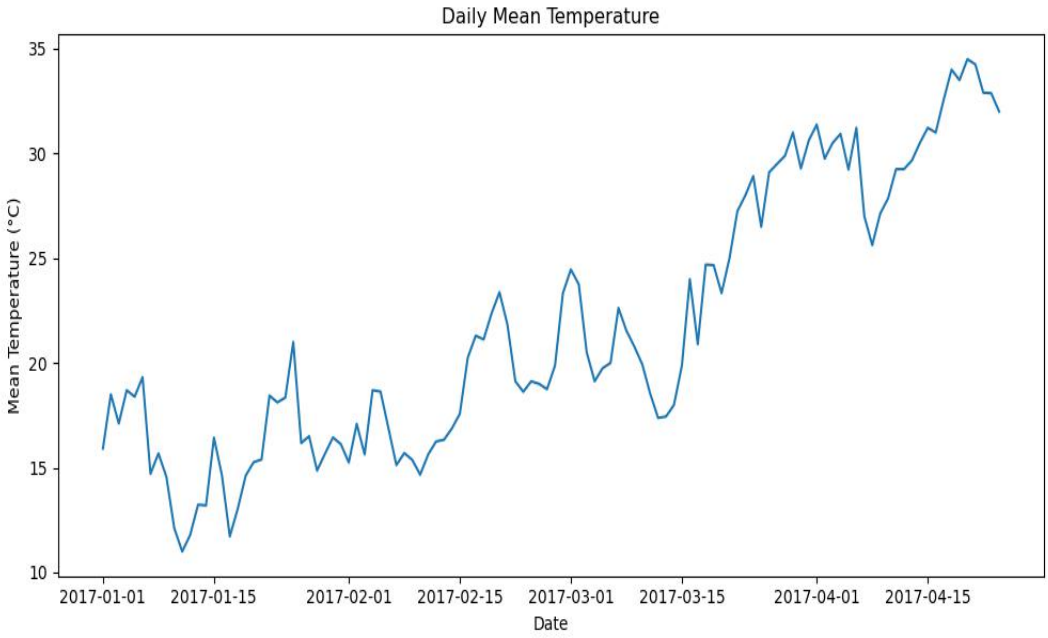
95.83 % Minimum Wind

Speed: 1.39 m/s Standard

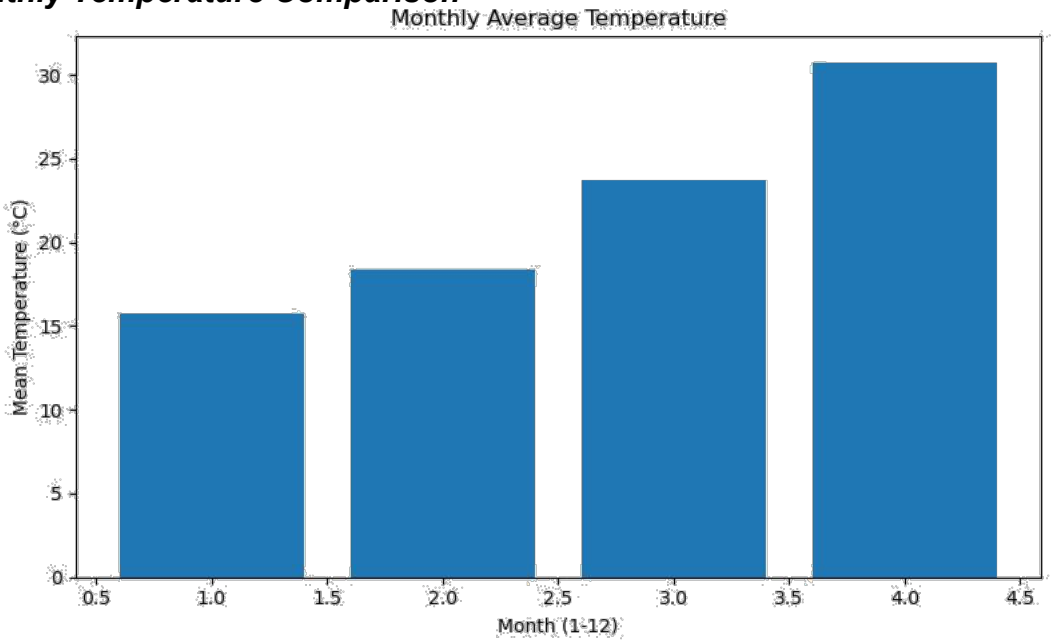
Deviation of Temperature:

6.36

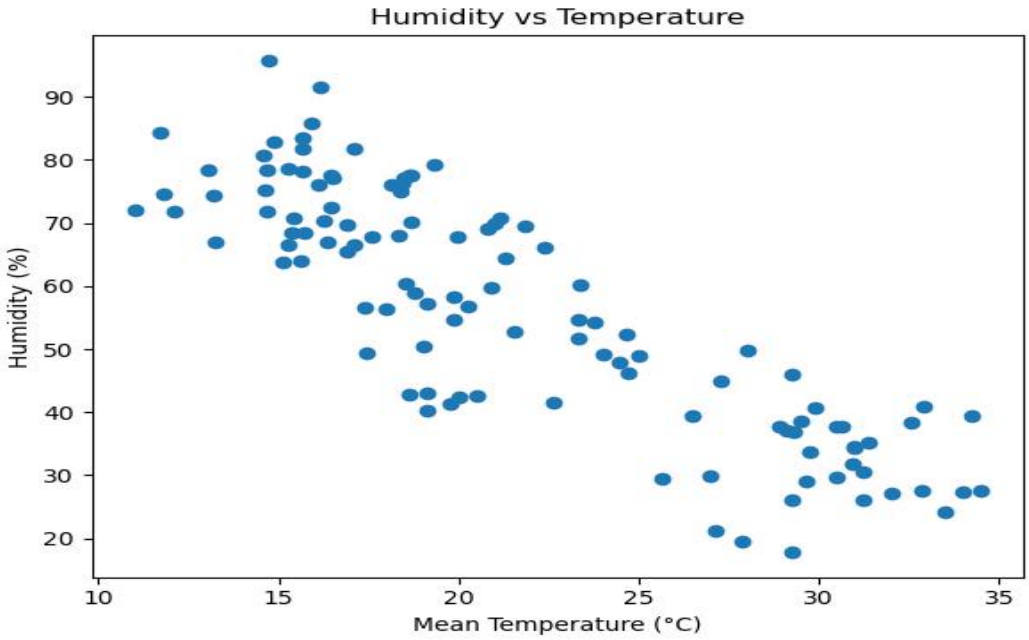
Daily Temperature Trend



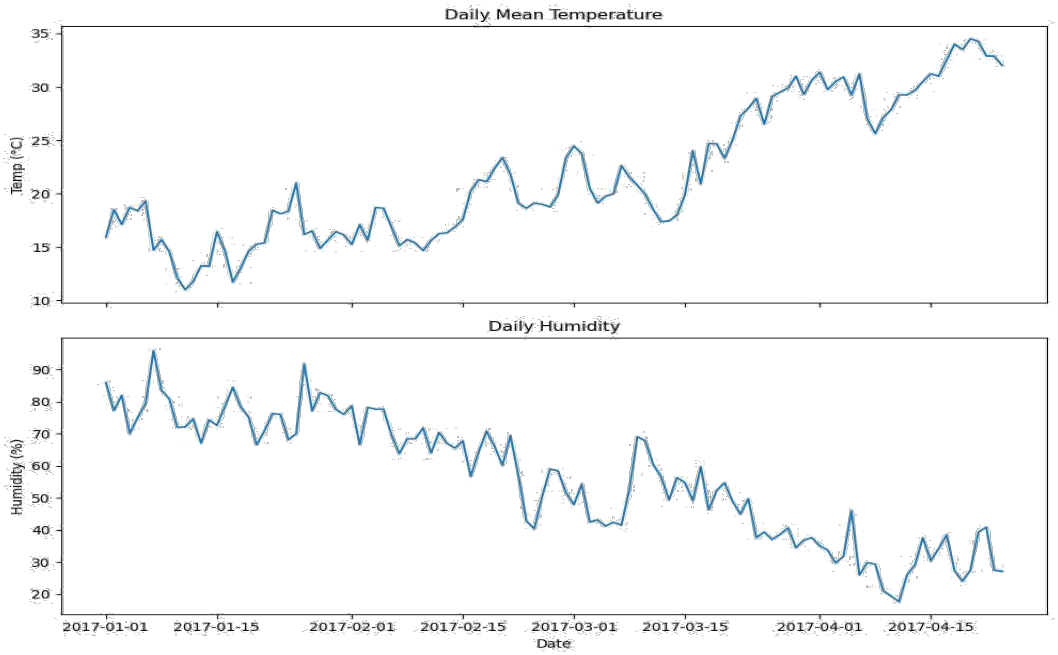
Monthly Temperature Comparison



Humidity vs Temperature



Temperature and Humidity Subplots



3. Conclusion

This report demonstrates data cleaning, statistical analysis, visualization, and aggregation of real weather data using Python libraries including Pandas, NumPy, and Matplotlib. Insights reveal seasonal changes, correlations between temperature and humidity, and monthly patterns.