Weather Analysis

Humidity Analysis

Relative Humidity Trends
Analyze **trends & patterns** in relative humidity levels over five-year period.

Geographic Comparisons
Identify **variations** and similarities in humidity levels across different cities of US, Canada and Israel.

Precipitation Analysis
Using humidity and other weather data to analyze **precipitation patterns**.

Pressure Analysis

Seasonal Variation
Assess pressure variations related to different seasons to identify **seasonal trends.**

Altitude and Pressure
Analyze how pressure changes with altitude, considering **elevation differences** in areas.

Weather Pattern Analysis
Identify **weather patterns** such as high & low-pressure systems, cold & warm fronts and their interactions.

Temperature Analysis

Comparative Seasonal Analysis
Compare the **temperature patterns** among countries for the same season.

Average Temperature Differences
Identify the Highest and lowest temperature and **average temperature** regions.

Moisture-Holding Capacity
Correlate **temperature, humidity** to define air's moisture holding capacity.

Weather Description Analysis

Weather Severity Analysis
Categorize **weather descriptions** by severity, such as mild, moderate, or severe.

Frequency and Occurrence Analysis
Examine the **frequency of each weather type** and its occurrence throughout the year.

Seasonal Patterns Relation
Correlated with the calendar to identify when specific weather conditions.

Wind Direction Analysis

Primary Wind Directions
Start by categorizing wind direction into the primary **cardinal directions**. E.g., North, West, South and East.

Prevailing Wind Direction
Identify the prevailing (most common) wind direction in a specific location for understanding dominant **weather patterns** in the area

Wind Speed Correlation
Correlate wind direction data with wind speed measurements to gain a comprehensive understanding of the **wind's behaviour**.

Wind Speed Analysis

Wind Speed Distribution
Analyze the **distribution of wind speeds** over a specific time period.

Time-Series Analysis
Examine how **wind speeds vary over time**. This includes detecting patterns, diurnal variations, and seasonal trends.

Extreme Wind Events
Identify and analyze **extreme wind events,** such as hurricanes, tornadoes, or severe storms.