Interactive Rainfall Analysis Dashboard – India

Internship Project – SoulVibe.Tech

Gokul S
batch: May 2025
Role: Data Analyst Intern

Objective

Goal:

- To develop an interactive Power BI dashboard that visualizes and analyzes rainfall patterns across Indian states and districts. The goal is to identify seasonal and monthly rainfall trends, highlight regions with extreme rainfall behavior, and derive meaningful insights to support climate-related analysis and planning.

Dataset Overview

- Contains:
  - State / UT Name
  - District Name
  - Monthly Rainfall (Jan–Dec)
  - Seasonal Aggregates (Jan–Feb, Mar–May, Jun–Sep, Oct–Dec)
  - Annual Rainfall
  - Region category

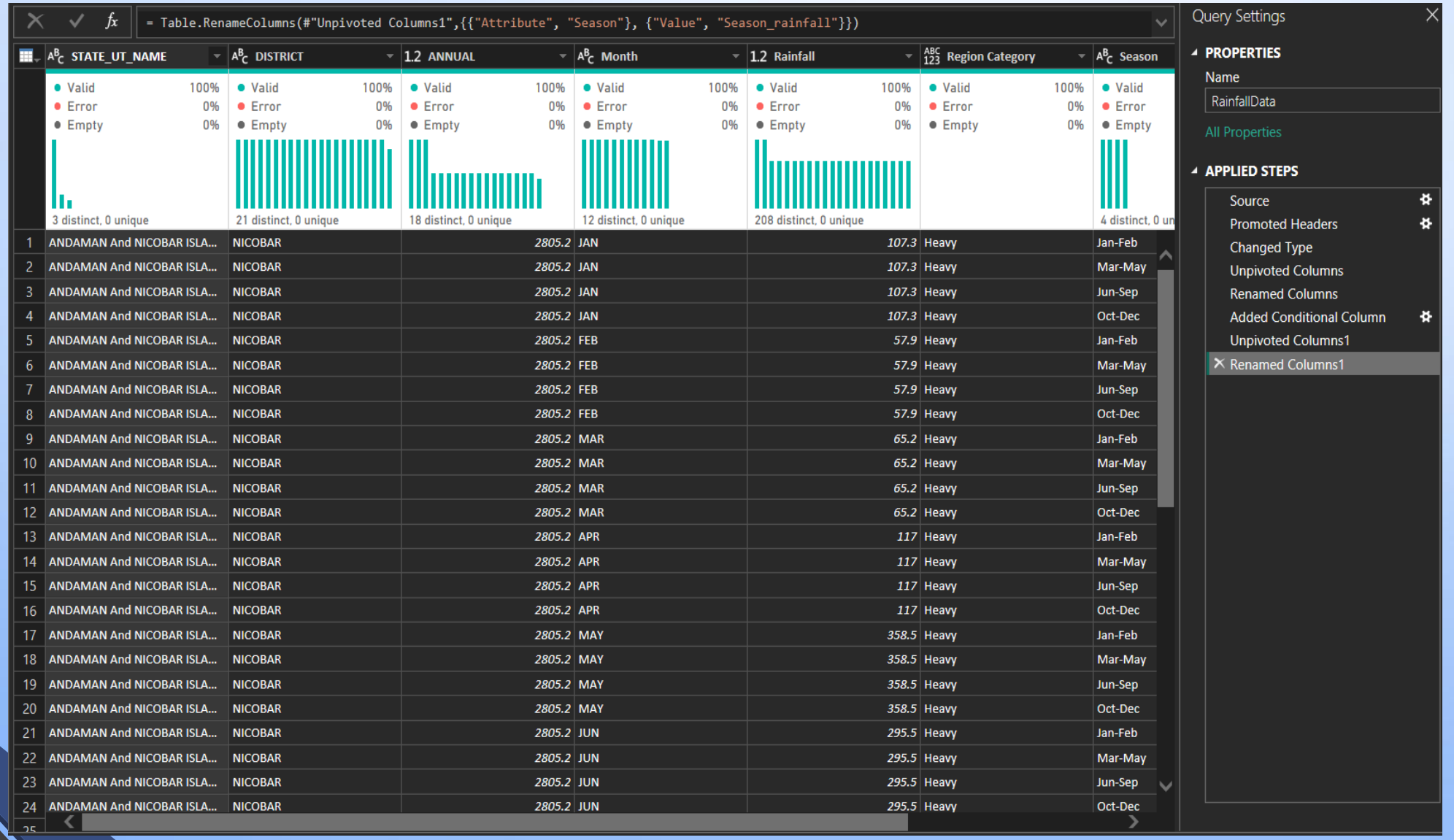
Data Preparation

- **Source:** We **got** the raw rainfall data from its original location (like a file).
- **Promoted Headers:** We used the **first row** as clear labels (like "State," "Month," "Rainfall") for our data columns.
- **Changed Type:** We made sure the data **understood** what kind of information was in each column (like numbers for rainfall, text for names).
- **Unpivoted Columns (x2):** Imagine turning a wide table into a long list. We did this **twice** to organize rainfall data that was spread across many columns (likely for different months or seasons) into a clearer "Month/Season" and "Rainfall Value" format.
- **Added Conditional Column:** We **created a new column** based on rules (maybe to categorize rainfall as "High" or "Low").
- **Renamed Columns:** We gave some columns **clearer names** like "Month" and "season_rainfall" so everyone understands them easily.
- Essentially, each step is a transformation that makes the raw rainfall data cleaner, more organized, and ready to be visualized and analyzed in your presentation.

Actual Dataset

STATE_UT_NAME	DISTRICT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	Jan-Feb	Mar-May	Jun-Sep	Oct-Dec
ANDAMAN And NICOBAR ISLANDS	NICOBAR	107.3	57.9	65.2	117	358.5	295.5	285	271.9	354.8	326	315.2	250.9	2805.2	165.2	540.7	1207.2	892.1
ANDAMAN And NICOBAR ISLANDS	SOUTH ANDAMAN	43.7	26	18.6	90.5	374.4	457.2	421.3	423.1	455.6	301.2	275.8	128.3	3015.7	69.7	483.5	1757.2	705.3
ANDAMAN And NICOBAR ISLANDS	N & M ANDAMAN	32.7	15.9	8.6	53.4	343.6	503.3	465.4	460.9	454.8	276.1	198.6	100	2913.3	48.6	405.6	1884.4	574.7
ARUNACHAL PRADESH	LOHIT	42.2	80.8	176.4	358.5	306.4	447	660.1	427.8	313.6	167.1	34.1	29.8	3043.8	123	841.3	1848.5	231
ARUNACHAL PRADESH	EAST SIANG	33.3	79.5	105.9	216.5	323	738.3	990.9	711.2	568	206.9	29.5	31.7	4034.7	112.8	645.4	3008.4	268.1
ARUNACHAL PRADESH	SUBANSIRI F.D	28	48.3	85.3	101.5	140.5	228.4	217.4	182.8	159.8	75.9	20.9	11.6	1300.4	76.3	327.3	788.4	108.4
ARUNACHAL PRADESH	TIRAP	42.2	72.7	141	316.9	328.7	614.7	851.9	500.6	418.3	218.7	42.9	22.9	3571.5	114.9	786.6	2385.5	284.5
ARUNACHAL PRADESH	ANJAW (LOHIT)	42.2	80.8	176.4	358.5	306.4	447	660.1	427.8	313.6	167.1	34.1	29.8	3043.8	123	841.3	1848.5	231
ARUNACHAL PRADESH	LOWER DIBANG	83.7	153.9	303.5	383.6	268	374.2	272	160.5	266.7	167.2	64	56	2553.3	237.6	955.1	1073.4	287.2
ARUNACHAL PRADESH	CHANGLANG	70.3	170.9	367.9	554.4	334.2	526.2	460.8	291.5	353.6	275	64.9	74.2	3543.9	241.2	1256.5	1632.1	414.1
ARUNACHAL PRADESH	PAPUM PARE	33.5	67.8	106.1	226.9	453	640.5	609.5	503.4	492.3	214.7	19.2	11.3	3378.2	101.3	786	2245.7	245.2
ARUNACHAL PRADESH	LOW SUBANSIRI	97.5	109.3	92.4	204.3	266.2	284.1	248.9	270.5	192.7	78.5	49.5	27.2	1921.1	206.8	562.9	996.2	155.2
ARUNACHAL PRADESH	UPPER SIANG	74.3	176.7	362.6	397.5	408.7	801.9	653	417.9	686	264.9	86.9	71.7	4402.1	251	1168.8	2558.8	423.5
ARUNACHAL PRADESH	WEST SIANG	26	66.7	76.8	229.2	239.5	416.6	592.4	312.4	291.1	126.8	33.7	29.5	2440.7	92.7	545.5	1612.5	190
ARUNACHAL PRADESH	DIBANG VALLEY	83.7	153.9	303.5	383.6	268	374.2	272	160.5	266.7	167.2	64	56	2553.3	237.6	955.1	1073.4	287.2
ARUNACHAL PRADESH	WEST KAMENG	35.2	43.5	58.9	134.3	341.1	665.3	749.9	579.1	490.9	233.9	40.3	27	3399.4	78.7	534.3	2485.2	301.2
ARUNACHAL PRADESH	EAST KAMENG	49	74.4	96.5	156.9	208	345.7	368.5	256.2	275.9	138.2	34.4	27.2	2030.9	123.4	461.4	1246.3	199.8
ARUNACHAL PRADESH	TAWANG(W KAME	35.2	43.5	58.9	134.3	341.1	665.3	749.9	579.1	490.9	233.9	40.3	27	3399.4	78.7	534.3	2485.2	301.2
ARUNACHAL PRADESH	KURUNG KUMEY	82.7	70	128.2	245.7	271.4	292.7	404	276.3	283.5	92.3	32.3	42.4	2221.5	152.7	645.3	1256.5	167
ASSAM	CACHAR	13.3	50.2	168.3	262.5	386.4	532.1	526.2	470.8	360.8	182.4	34.8	11.4	2999.2	63.5	817.2	1889.9	228.6
ASSAM	DARRANG	13.1	21.4	53.5	168.8	320	419.7	345.8	272.1	221.5	95.4	17.2	9.3	1957.8	34.5	542.3	1259.1	121.9
ASSAM	GOALPARA	12.7	20.4	51.1	196.6	399.8	567.8	502.8	334.6	304.9	157.7	21.7	5.2	2575.3	33.1	647.5	1710.1	184.6
ASSAM	KAMRUP	12	20.8	58.6	151.7	293.4	365.5	345.1	248.7	188.4	106.6	15.1	7.5	1813.4	32.8	503.7	1147.7	129.2
ASSAM	LAKHIMPUR	27.7	48.6	76.7	165.5	331.9	528.3	605.2	467.6	424.1	140.3	23	20.4	2859.3	76.3	574.1	2025.2	183.7
ASSAM	NORTH CACHAR	16.7	47.5	158.9	207.9	308	328.1	270.3	201.3	189.1	196.4	42.1	11.2	1977.5	64.2	674.8	988.8	249.7
ASSAM	NAGAON	12	22.5	48.1	128.9	171.3	285.9	326.3	294.1	218.6	120	21.6	10.8	1660.1	34.5	348.3	1124.9	152.4
ASSAM	SIVASAGAR	20.1	33.2	78.3	126.5	257.1	255.5	374.8	342.3	196.9	96.3	20.3	10.3	1811.6	53.3	461.9	1169.5	126.9
ASSAM	BARPETA	10.3	26.9	54	175.7	391.5	694.3	757.3	527.3	462.1	142.1	20.4	12.7	3274.6	37.2	621.2	2441	175.2
ASSAM	DHUBRI	10.3	11.7	46.6	147.5	391.6	603	554.7	418.7	340.1	155.1	19.2	4.1	2702.6	22	585.7	1916.5	178.4

Data Cleaning

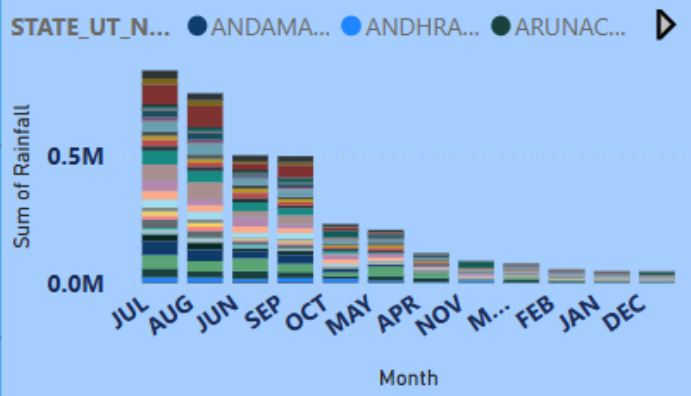


	STATE_UT_NAME	DISTRICT	ANNUAL	Month	Rainfall	Region Category	Season
	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid Error Empty
	3 distinct, 0 unique	21 distinct, 0 unique	18 distinct, 0 unique	12 distinct, 0 unique	208 distinct, 0 unique		4 distinct, 0 un
1	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	JAN	107.3	Heavy	Jan-Feb
2	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	JAN	107.3	Heavy	Mar-May
3	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	JAN	107.3	Heavy	Jun-Sep
4	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	JAN	107.3	Heavy	Oct-Dec
5	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	FEB	57.9	Heavy	Jan-Feb
6	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	FEB	57.9	Heavy	Mar-May
7	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	FEB	57.9	Heavy	Jun-Sep
8	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	FEB	57.9	Heavy	Oct-Dec
9	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	MAR	65.2	Heavy	Jan-Feb
10	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	MAR	65.2	Heavy	Mar-May
11	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	MAR	65.2	Heavy	Jun-Sep
12	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	MAR	65.2	Heavy	Oct-Dec
13	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	APR	117	Heavy	Jan-Feb
14	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	APR	117	Heavy	Mar-May
15	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	APR	117	Heavy	Jun-Sep
16	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	APR	117	Heavy	Oct-Dec
17	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	MAY	358.5	Heavy	Jan-Feb
18	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	MAY	358.5	Heavy	Mar-May
19	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	MAY	358.5	Heavy	Jun-Sep
20	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	MAY	358.5	Heavy	Oct-Dec
21	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	JUN	295.5	Heavy	Jan-Feb
22	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	JUN	295.5	Heavy	Mar-May
23	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	JUN	295.5	Heavy	Jun-Sep
24	ANDAMAN And NICOBAR ISLA...	NICOBAR	2805.2	JUN	295.5	Heavy	Oct-Dec

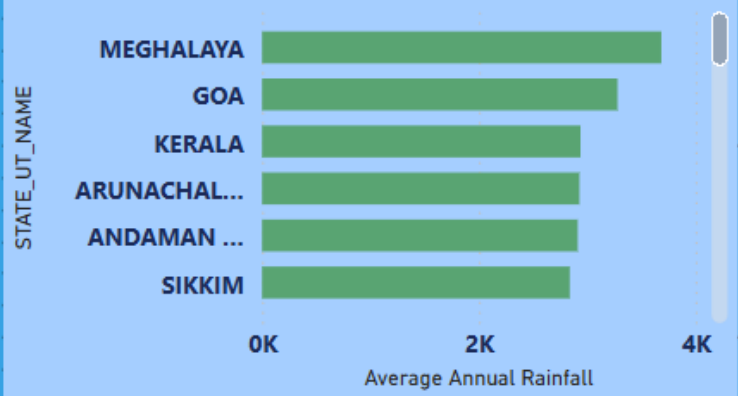
Interactive Rainfall Analysis Dashboard – India

Average Annual Rainfall	Avg Monthly Rainfall	Highest Monthly Rainfall	Total Districts	Top Rainfall District
1.35K	112.25	1.82K	637	ZUNHEBOTO

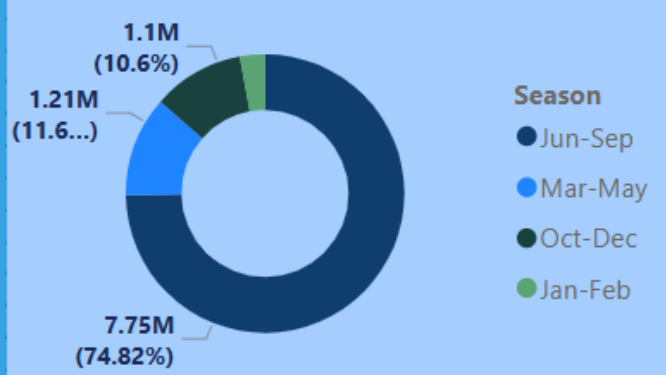
Rainfall by Month and STATE_UT_NAME



Annual Rainfall by STATE



Season_rainfall by Season



ANNUAL and STATE by DISTRICT

STATE_UT_NAME	DISTRICT	Sum of ANNUAL	Region Category
ANDAMAN And NICOBAR ISLANDS	N & M ANDAMAN	139,838.40	Heavy
ANDAMAN And NICOBAR ISLANDS	NICOBAR	134,649.60	Heavy
ANDAMAN And NICOBAR ISLANDS	SOUTH ANDAMAN	144,753.60	Heavy
ANDHRA PRADESH	ADILABAD	53,760.00	Low
ANDHRA PRADESH	ANANTAPUR	27,489.60	Low
ANDHRA PRADESH	CHITTOOR	43,113.60	Low
ANDHRA PRADESH	EAST GODAVARI	53,088.00	Low
ANDHRA PRADESH	GUNTUR	41,832.00	Low
ANDHRA PRADESH	HYDERABAD	40,862.40	Low
ANDHRA PRADESH	KARIMNAGAR	47,030.40	Low
ANDHRA PRADESH	KHAMMAM	52,555.20	Low
ANDHRA PRADESH	KRISHNA	49,300.80	Low
ANDHRA PRADESH	KUDDAPAH	34,411.20	Low
Total		41,443,560.00	

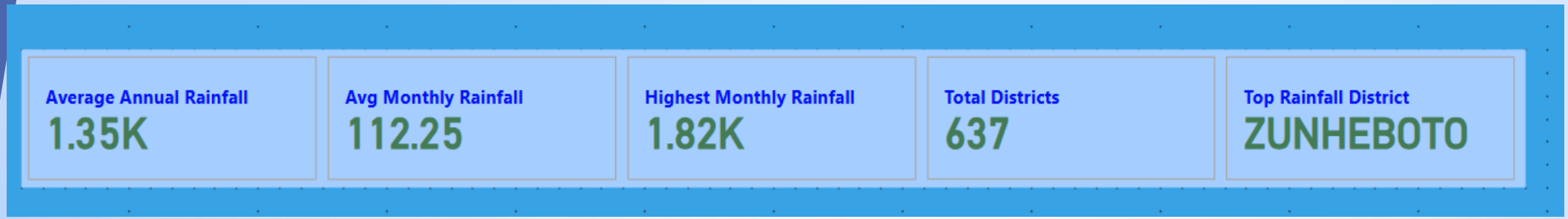
STATE
- ANDAMAN ...
- ANDHRA PR...
- ARUNACHA...
- ASSAM
- BIHAR
- CHANDIGARH
- CHATISGARH

Region Category
- Heavy
- Low
- Moderate

Month
- APR
- AUG
- DEC
- FEB

Season
- Jan-Feb
- Jun-Sep
- Mar-May

KPI Cards in Dashboard

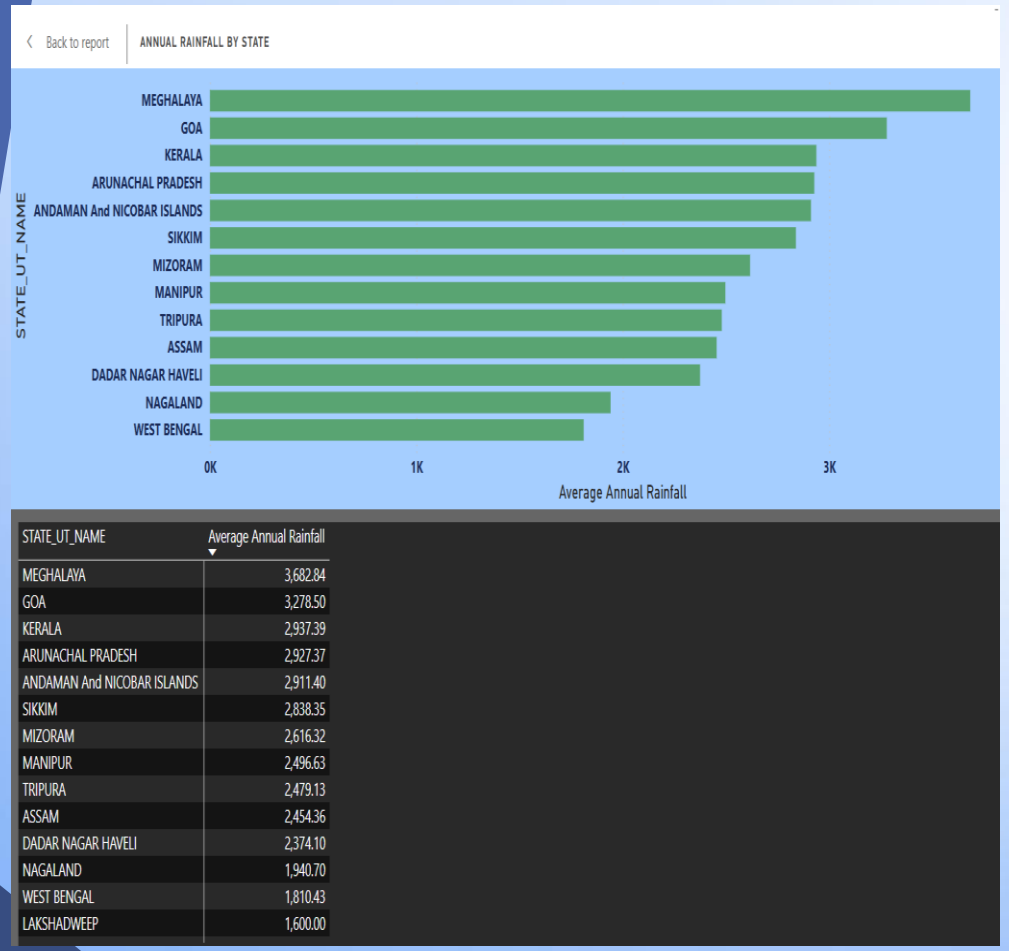


✅ **Key Rainfall Statistics for India:**

This section of the dashboard provides a concise overview of India's rainfall patterns based on the analyzed data.

- **Average Annual Rainfall:** The average total rainfall received across all locations in a year is 1.35K. The 'K' likely represents thousands, so this is 1350 mm.
- **Average Monthly Rainfall:** On average, each month sees about 112.25 mm of rainfall across the regions studied.
- **Highest Monthly Rainfall:** The single highest recorded rainfall in any month at any district within the dataset is 1.82K, or 1820 mm.
- **Total Districts Analyzed:** The rainfall data encompasses a total of 637 districts across India.
- **Top Rainfall District:** Among all the districts, ZUNHEBOTO has experienced the highest recorded rainfall.

Bar Chart:



STATE_UT_NAME	Average Annual Rainfall
MEGHALAYA	3,682.84
GOA	3,278.50
KERALA	2,937.39
ARUNACHAL PRADESH	2,927.37
ANDAMAN And NICOBAR ISLANDS	2,911.40
SIKKIM	2,838.35
MIZORAM	2,616.32
MANIPUR	2,496.63
TRIPURA	2,479.13
ASSAM	2,454.36
DADAR NAGAR HAVELI	2,374.10
NAGALAND	1,940.70
WEST BENGAL	1,810.43
LAKSHADWEEP	1,600.00

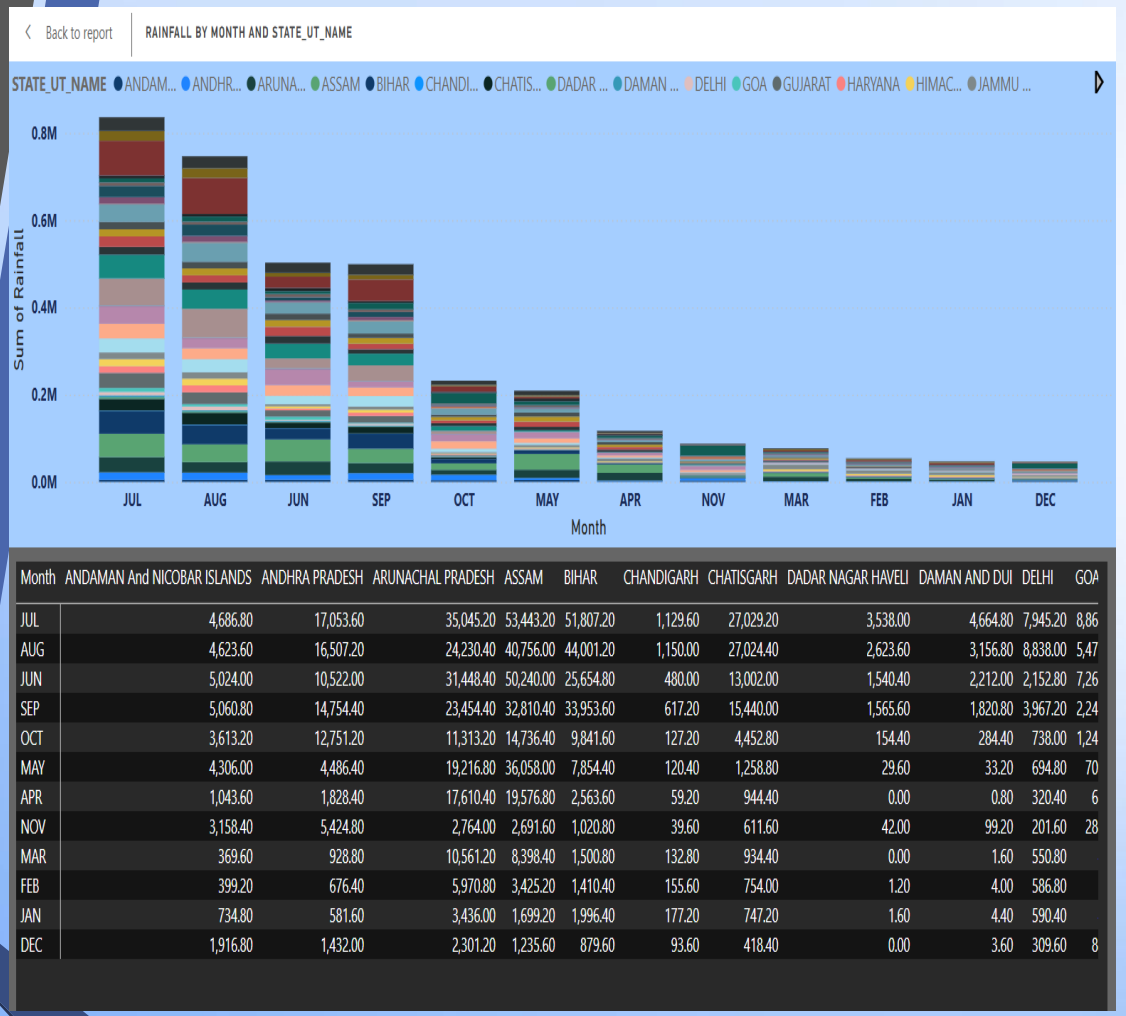
📊 Visualizing India's Rainfall: State-wise Averages

This image juxtaposes a horizontal bar chart with a data table, illustrating the average annual rainfall for Indian states and union territories. The bar chart offers a visual comparison, with bar length proportional to rainfall. The table provides precise rainfall figures (in mm) for each state/UT, ordered from highest to lowest.

✅ Key Rainfall Insights:

- **Meghalaya** leads with the highest average annual rainfall (3682.84 mm).
- **Goa** (3278.50 mm) and **Kerala** (2937.39 mm) also receive substantial rainfall.
- **West Bengal** (1810.43 mm) and **Lakshadweep** (1600.00 mm) have comparatively lower averages.
- This combined visualization clearly highlights the regional variations in India's annual rainfall patterns.

Stacked Column Chart:



Month	ANDAMAN And NICOBAR ISLANDS	ANDHRA PRADESH	ARUNACHAL PRADESH	ASSAM	BIHAR	CHANDIGARH	CHATISGARH	DADAR NAGAR HAVELI	DAMAN AND DUI	DELHI	GOA
JUL	4,686.80	17,053.60	35,045.20	53,443.20	51,807.20	1,129.60	27,029.20	3,538.00	4,664.80	7,945.20	8,86
AUG	4,623.60	16,507.20	24,230.40	40,756.00	44,001.20	1,150.00	27,024.40	2,623.60	3,156.80	8,838.00	5,47
JUN	5,024.00	10,522.00	31,448.40	50,240.00	25,654.80	480.00	13,002.00	1,540.40	2,212.00	2,152.80	7,26
SEP	5,060.80	14,754.40	23,454.40	32,810.40	33,953.60	617.20	15,440.00	1,565.60	1,820.80	3,967.20	2,24
OCT	3,613.20	12,751.20	11,313.20	14,736.40	9,841.60	127.20	4,452.80	154.40	284.40	738.00	1,24
MAY	4,306.00	4,486.40	19,216.80	36,058.00	7,854.40	120.40	1,258.80	29.60	33.20	694.80	70
APR	1,043.60	1,828.40	17,610.40	19,576.80	2,563.60	59.20	944.40	0.00	0.80	320.40	6
NOV	3,158.40	5,424.80	2,764.00	2,691.60	1,020.80	39.60	611.60	42.00	99.20	201.60	28
MAR	369.60	928.80	10,561.20	8,398.40	1,500.80	132.80	934.40	0.00	1.60	550.80	
FEB	399.20	676.40	5,970.80	3,425.20	1,410.40	155.60	754.00	1.20	4.00	586.80	
JAN	734.80	581.60	3,436.00	1,699.20	1,996.40	177.20	747.20	1.60	4.40	590.40	
DEC	1,916.80	1,432.00	2,301.20	1,235.60	879.60	93.60	418.40	0.00	3.60	309.60	8

📊 **Visualizing Monthly Rainfall by State/UT**

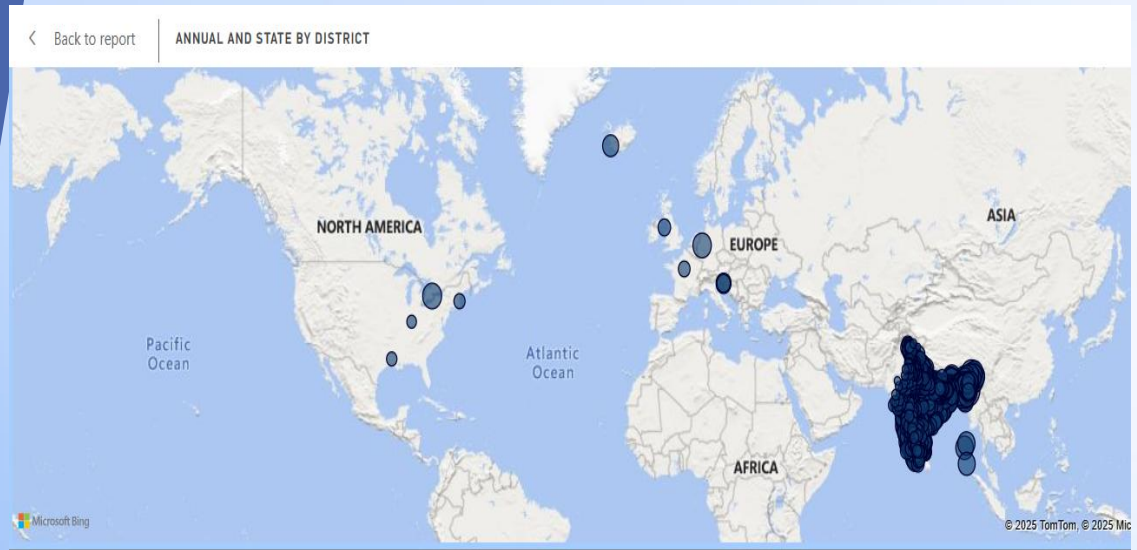
This image combines a stacked bar chart with a detailed table, showing the sum of rainfall for each month across different states and union territories. The bar chart visually represents the monthly rainfall distribution for each state/UT as stacked segments. The table provides the exact monthly rainfall figures (in mm) for every state/UT.

✅ **Key Rainfall Distribution Insights:**

- **July and August** generally exhibit the highest rainfall across many states/UTs.
- **Significant variations** in monthly rainfall patterns exist between different regions.
- The table allows for precise comparison of rainfall amounts for specific months and locations.

This visualization effectively illustrates the temporal and spatial distribution of rainfall across India.

Map Visual:



DISTRICT	Sum of ANNUAL	First STATE_UT_NAME
TAMENGLONG	347,006.40	MANIPUR
JAINTIA HILLS	306,235.20	MEGHALAYA
EAST KHASI HI	295,972.80	MEGHALAYA
UPPER SIANG	211,300.80	ARUNACHAL PRADESH
UDUPI	206,688.00	KARNATAKA
EAST SIANG	193,665.60	ARUNACHAL PRADESH
DAKSHIN KANDA	187,958.40	KARNATAKA
KOKRAJHAR	181,065.60	ASSAM
KARIMGANJ	175,238.40	ASSAM
W KHASI HILL	174,864.00	MEGHALAYA
KASARGOD	173,836.80	KERALA
TIRAP	171,432.00	ARUNACHAL PRADESH
CHANGLANG	170,107.20	ARUNACHAL PRADESH
NORTH GOA	166,627.20	GOA

🗺️ **Global Rainfall Visualization: Annual and State by District**

This image displays a world map with overlaid circles and a corresponding table, attempting to represent annual rainfall data associated with districts and their states. The circles on the map appear concentrated over India, with varying sizes. The table lists districts, their "Sum of Annual" values, and their "First STATE_UT_NAME".

⚠️ **Potential Data Interpretation Issues:**

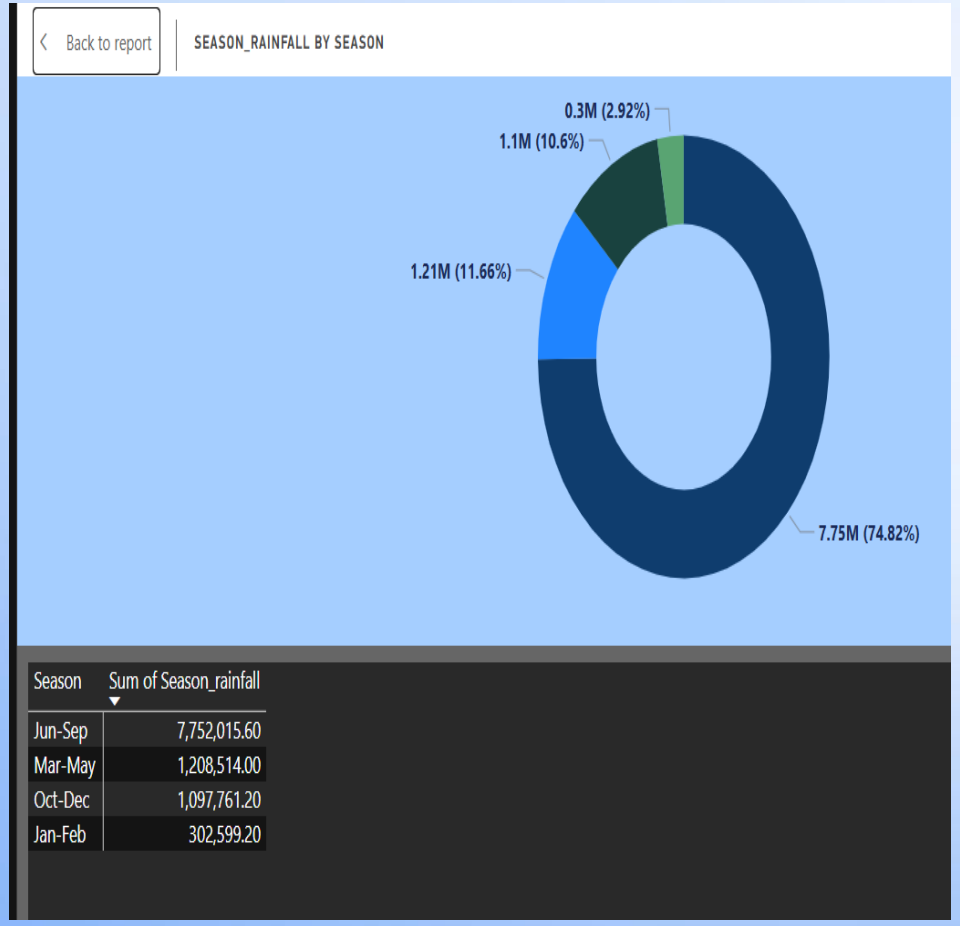
•**Global Map Mismatch:** The map shows global locations, but the table primarily lists Indian districts.

•**Unclear Circle Mapping:** The connection between circle size and rainfall amount or specific districts is not explicitly defined on the map.

•**"Sum of Annual" Ambiguity:** The unit and exact meaning of "Sum of Annual" are unclear without further context.

Therefore, while the image presents data, the visualization lacks clear mapping and context for straightforward interpretation of rainfall patterns.

Donut Chart:



📊 **Seasonal Rainfall Distribution**

This image presents a donut chart and a corresponding table illustrating the distribution of rainfall across four seasons. The donut chart visually divides the total rainfall into proportions for each season. The table provides the exact sum of rainfall (in unspecified units, likely mm) for each season.

✅ **Key Seasonal Rainfall Insights:**

- **Jun-Sep (Monsoon):** Dominates with the highest rainfall (7.75M, 74.82%).
- **Mar-May (Pre-Monsoon):** Contributes a smaller portion (1.21M, 11.66%).
- **Oct-Dec (Post-Monsoon):** Has a slightly lower contribution (1.1M, 10.6%).
- **Jan-Feb (Winter):** Records the lowest rainfall (0.3M, 2.92%).

This visualization clearly emphasizes the significant contribution of the June-September monsoon season to the overall rainfall.

Table Visual:

Back to report

STATE_UT_NAME	DISTRICT	Sum of ANNUAL	Region Category
ANDAMAN And NICOBAR ISLANDS	N & M ANDAMAN	139,838.40	Heavy
ANDAMAN And NICOBAR ISLANDS	NICOBAR	134,649.60	Heavy
ANDAMAN And NICOBAR ISLANDS	SOUTH ANDAMAN	144,753.60	Heavy
ANDHRA PRADESH	ADILABAD	53,760.00	Low
ANDHRA PRADESH	ANANTAPUR	27,489.60	Low
ANDHRA PRADESH	CHITTOOR	43,113.60	Low
ANDHRA PRADESH	EAST GODAVARI	53,088.00	Low
ANDHRA PRADESH	GUNTUR	41,832.00	Low
ANDHRA PRADESH	HYDERABAD	40,862.40	Low
ANDHRA PRADESH	KARIMNAGAR	47,030.40	Low
ANDHRA PRADESH	KHAMMAM	52,555.20	Low
ANDHRA PRADESH	KRISHNA	49,300.80	Low
ANDHRA PRADESH	KUDDAPAH	34,411.20	Low
ANDHRA PRADESH	KURNOOL	32,620.80	Low
ANDHRA PRADESH	MAHABUBNAGAR	35,092.80	Low
ANDHRA PRADESH	MEDAK	44,270.40	Low
Total		41,443,560.00	

STATE_UT_NAME, DISTRICT, Region Category	Sum of ANNUAL
ANDAMAN And NICOBAR ISLANDS, N & M ANDAMAN, Heavy	139,838.40
ANDAMAN And NICOBAR ISLANDS, NICOBAR, Heavy	134,649.60
ANDAMAN And NICOBAR ISLANDS, SOUTH ANDAMAN, Heavy	144,753.60
ANDHRA PRADESH, ADILABAD, Low	53,760.00
ANDHRA PRADESH, ANANTAPUR, Low	27,489.60
ANDHRA PRADESH, CHITTOOR, Low	43,113.60
ANDHRA PRADESH, EAST GODAVARI, Low	53,088.00
ANDHRA PRADESH, GUNTUR, Low	41,832.00
ANDHRA PRADESH, HYDERABAD, Low	40,862.40
ANDHRA PRADESH, KARIMNAGAR, Low	47,030.40
ANDHRA PRADESH, KHAMMAM, Low	52,555.20
ANDHRA PRADESH, KRISHNA, Low	49,300.80
ANDHRA PRADESH, KUDDAPAH, Low	34,411.20
Total	**41,443,560.00**

📊 **Annual Rainfall by District and Region Category**

This image displays a table presenting the "Sum of Annual" rainfall for various districts, categorized by "Region Category," within different "STATE_UT_NAME" entries. The table shows the annual rainfall amount alongside a classification of "Heavy" or "Low" for the rainfall in each district.

✅ **Key Rainfall Distribution Insights:**

- **Andaman and Nicobar Islands:** Districts within this UT (N & M Andaman, Nicobar, South Andaman) are categorized as having "Heavy" annual rainfall.
- **Andhra Pradesh:** The numerous districts listed under Andhra Pradesh are all categorized as having "Low" annual rainfall.
- **Total Annual Rainfall:** The table provides a "Total" sum of the "Sum of Annual" column across all listed districts, amounting to 41,443,560.00 (the units are not specified).

This table provides a direct comparison of annual rainfall amounts and their corresponding regional categories for the listed districts and states/UTs.

Slicer Filters:

✅ **Power BI Slicer Explanation:**

This image displays a set of **slicers** in Power BI. Slicers are visual filters that allow users to interactively filter data displayed in reports and dashboards. They provide an easy and intuitive way to explore different subsets of data.

•**State:** This slicer allows users to filter data based on specific states or union territories. Multiple selections are possible (though none are selected in the image).

•**Month:** This slicer enables filtering data by specific months of the year. Again, multiple month selections are possible.

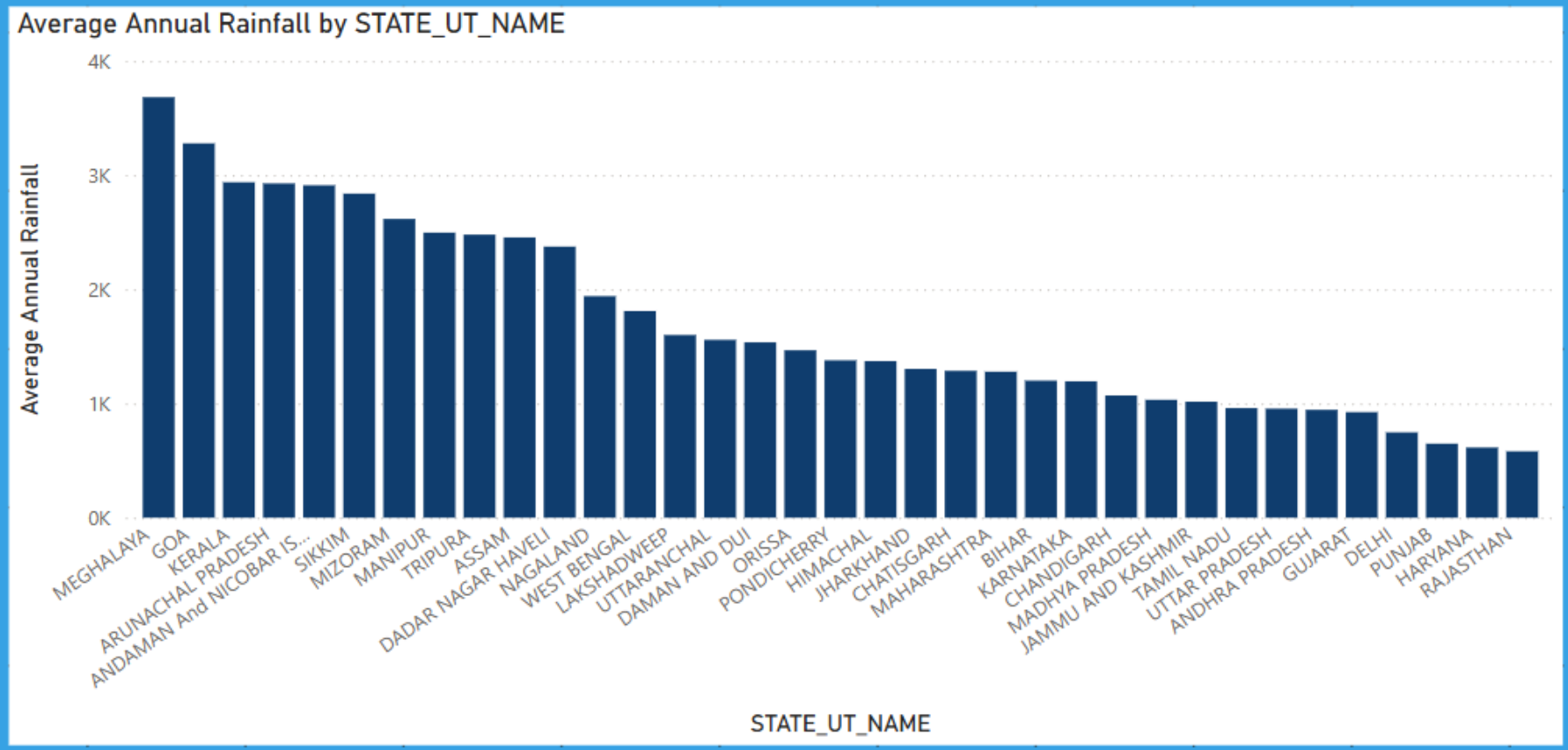
•**Region Category:** This slicer filters data based on predefined region categories, such as "Heavy" and "Low" (and "Moderate," though not selected).

•**Season:** This slicer allows filtering data by predefined seasons, grouping months together (e.g., "Jan-Feb," "Jun-Sep").

By selecting items within these slicers, users can dynamically update the visuals on the Power BI report to show only the data relevant to their current analysis. The unchecked boxes indicate that no filters are currently applied for these categories, showing the entire dataset.

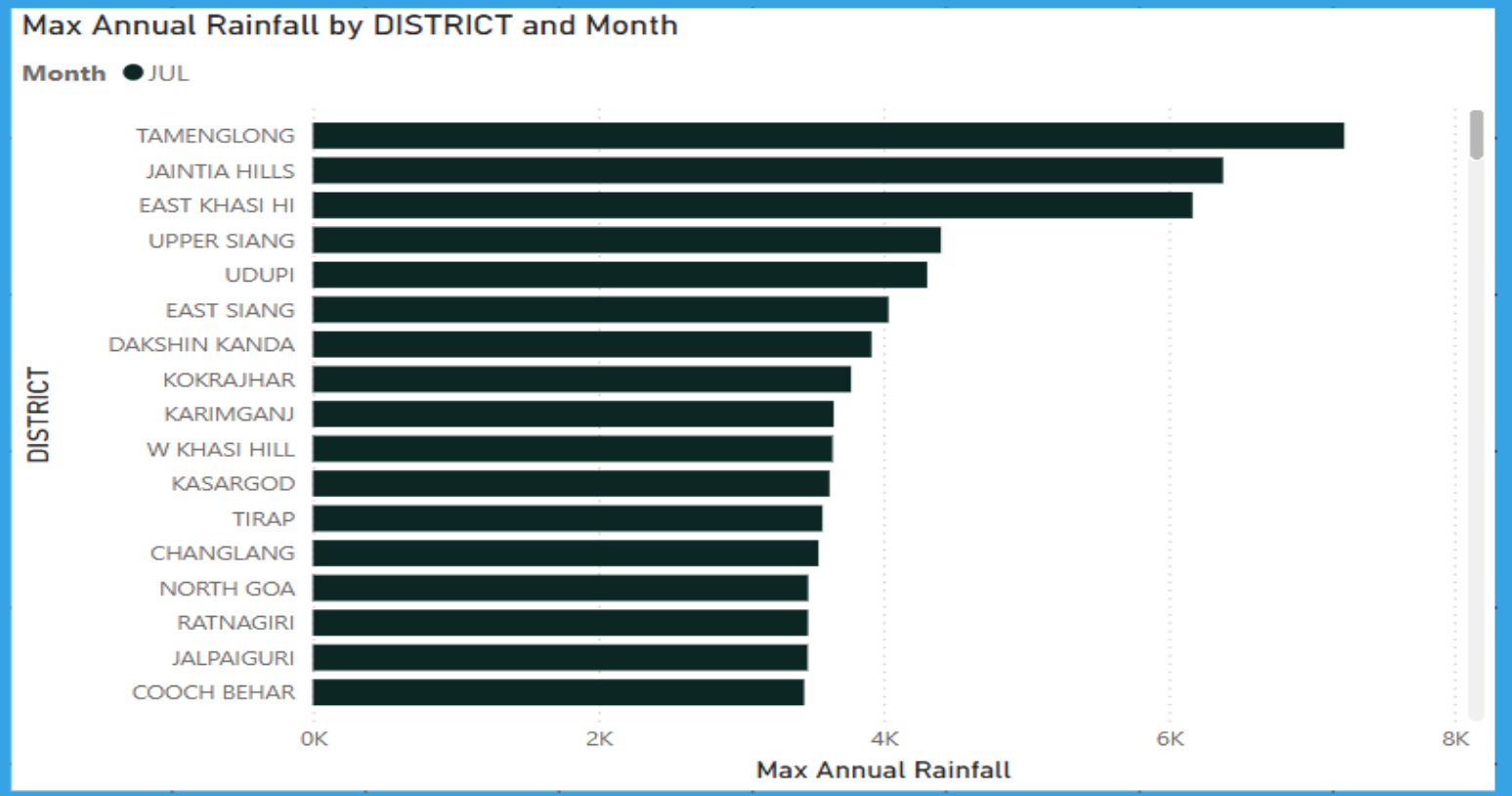
Analysis Tasks

Which state receives the highest average annual rainfall?
Meghalaya



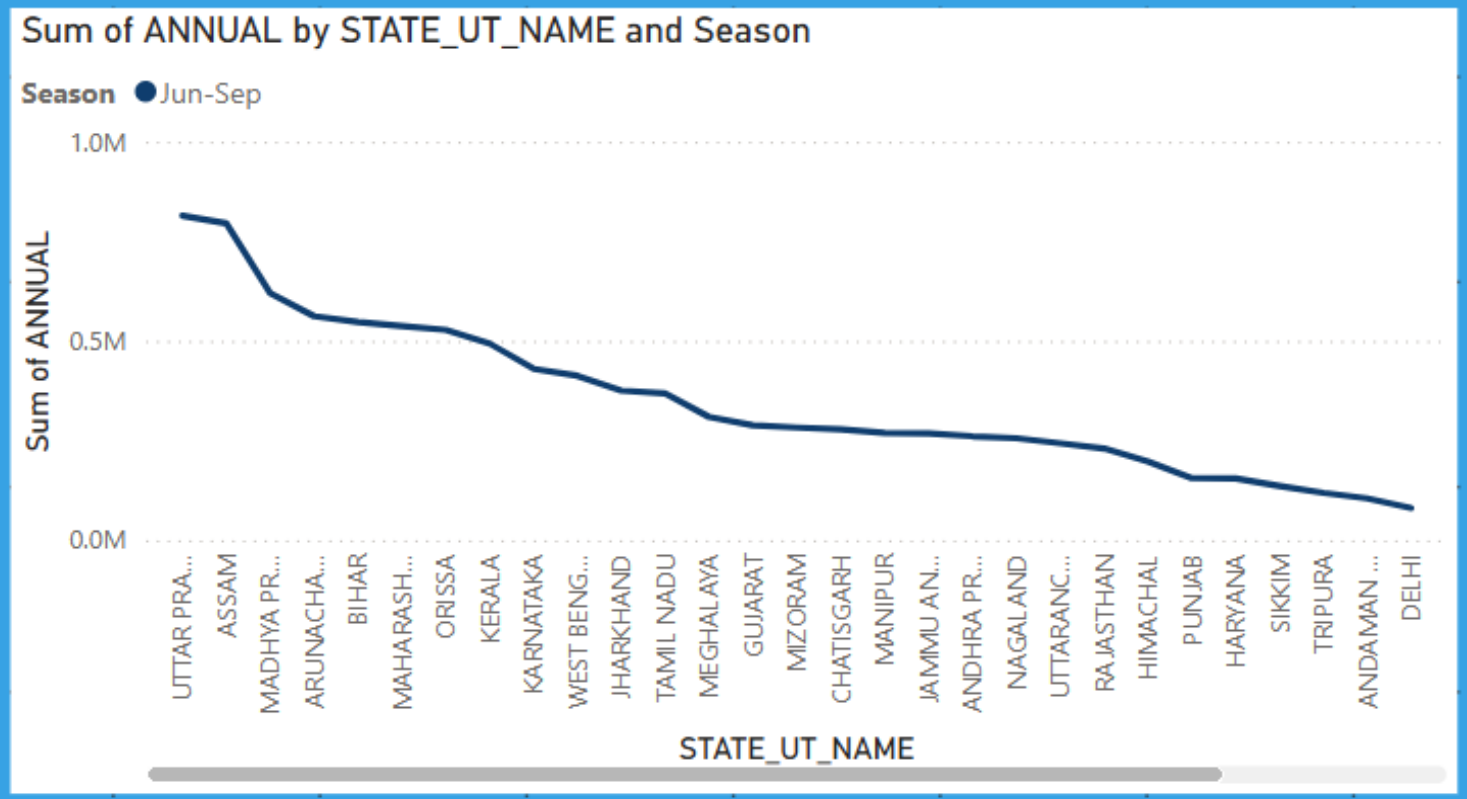
Analysis Tasks

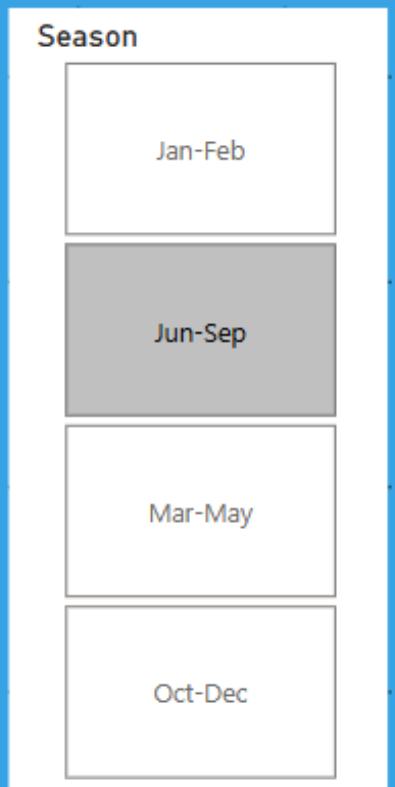
Which district reports the highest rainfall in July?
Tamenglong



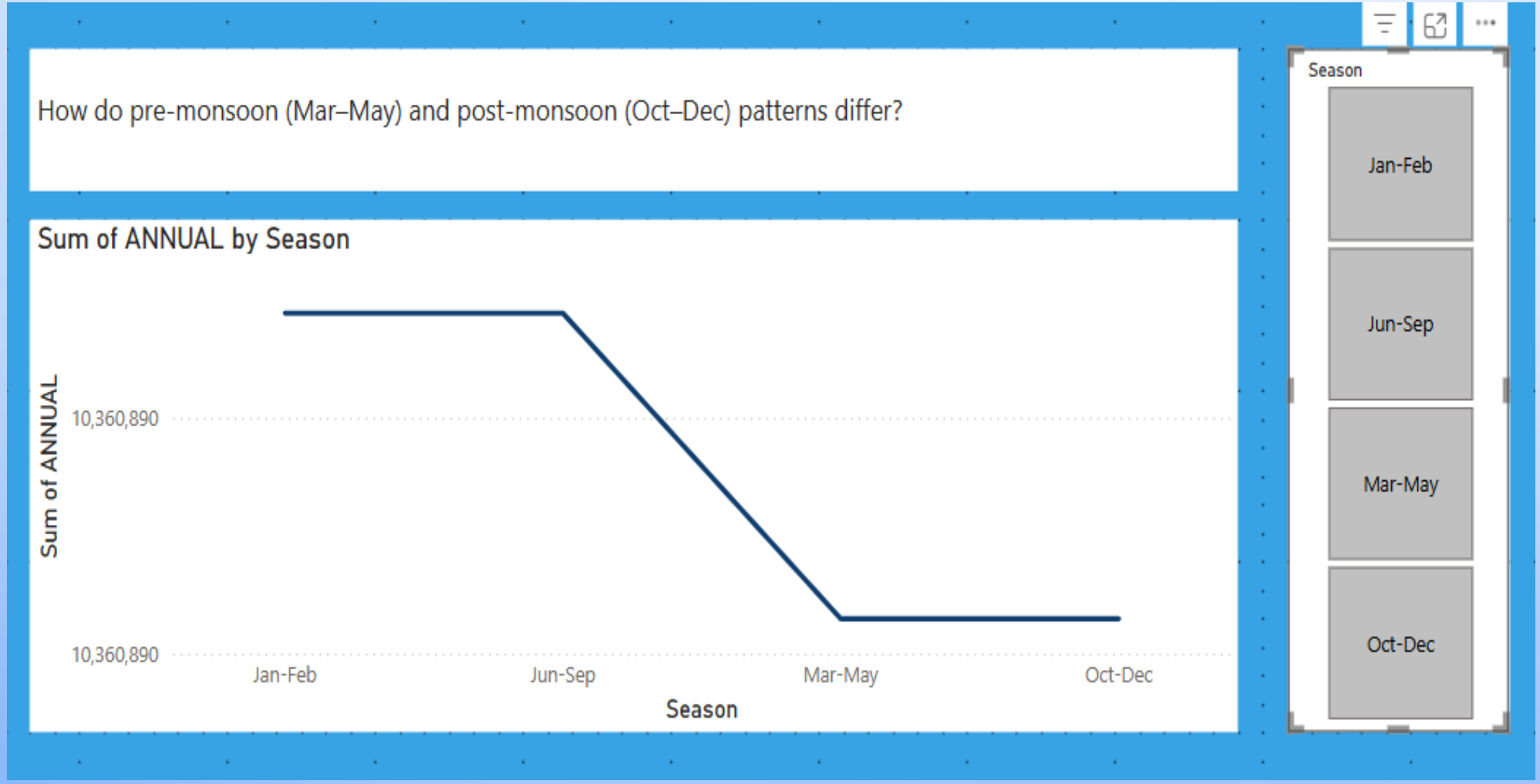
Analysis Tasks

What is the trend of monsoon (Jun–Sep) rainfall across states?
Down Trends





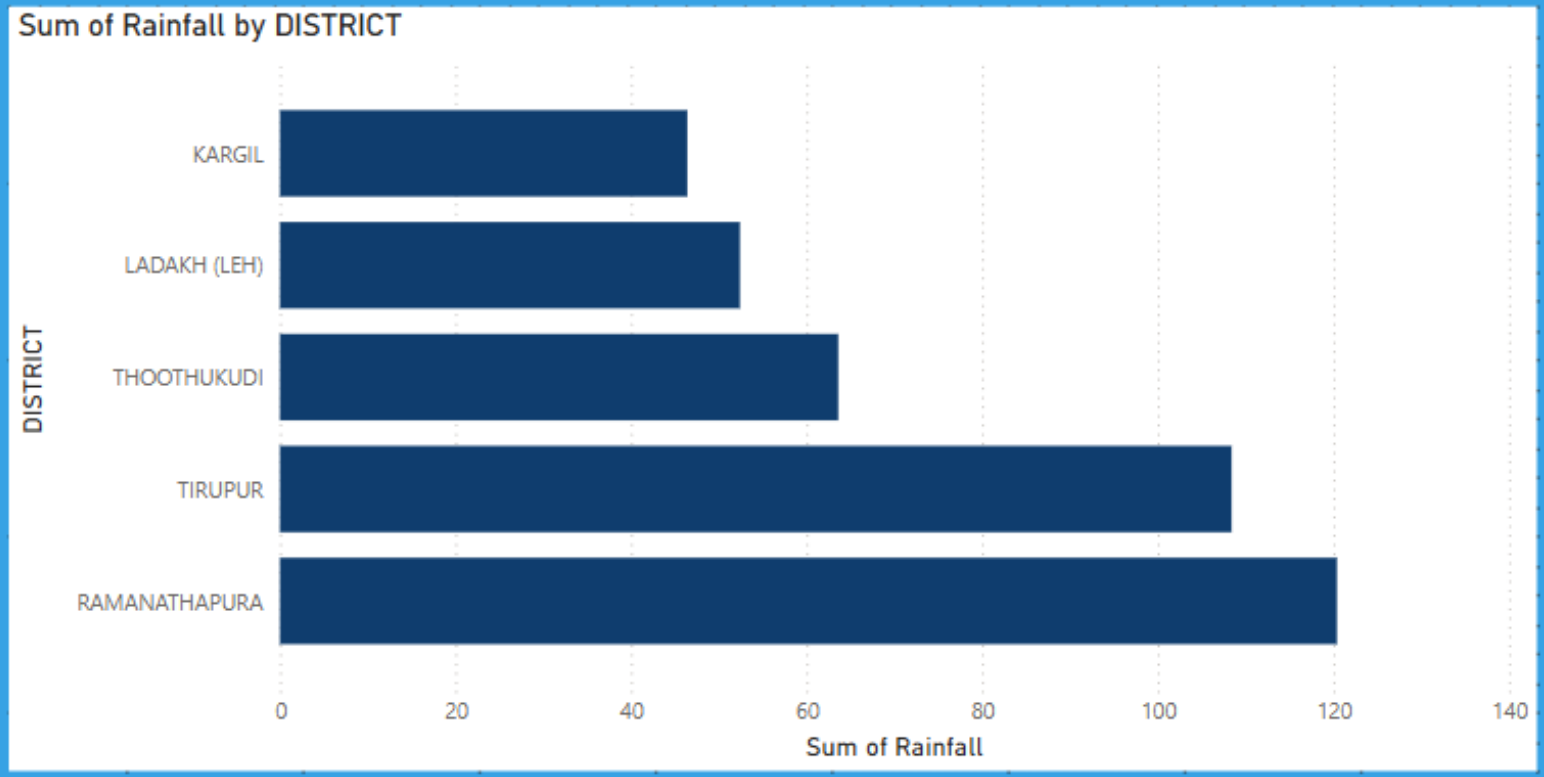
Analysis Tasks



Analysis Tasks

Identify 5 driest districts and analyze their monthly distribution.

Based on July month listed driest districts



Thank You