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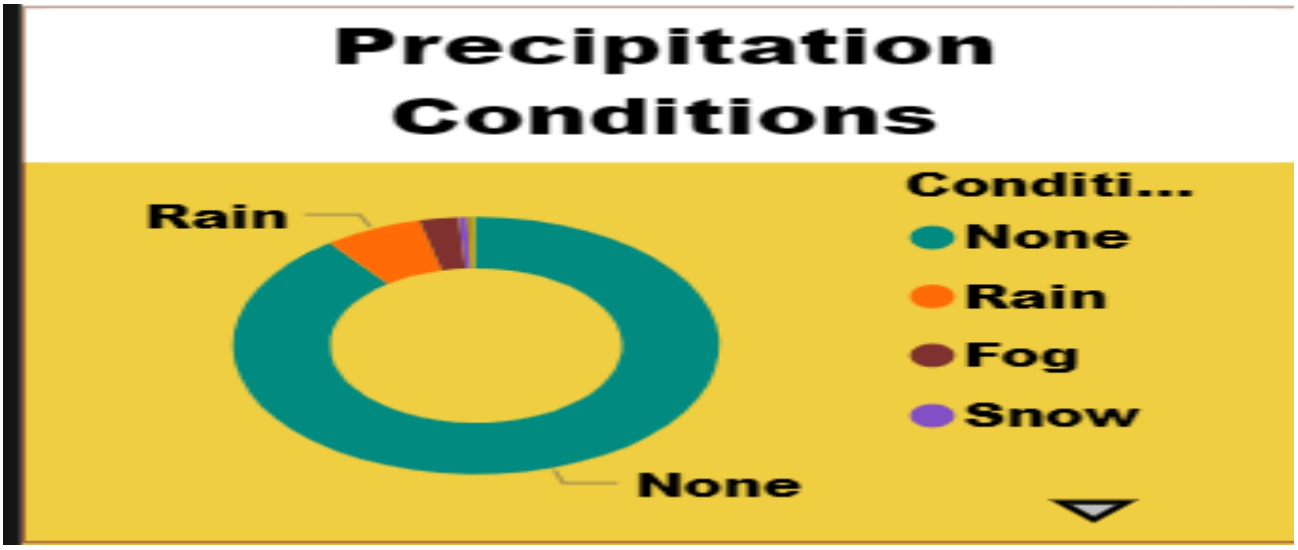
CLASS: BE COMPS A
BATCH: ADV BATCH F

ADV EXPERIMENT 6

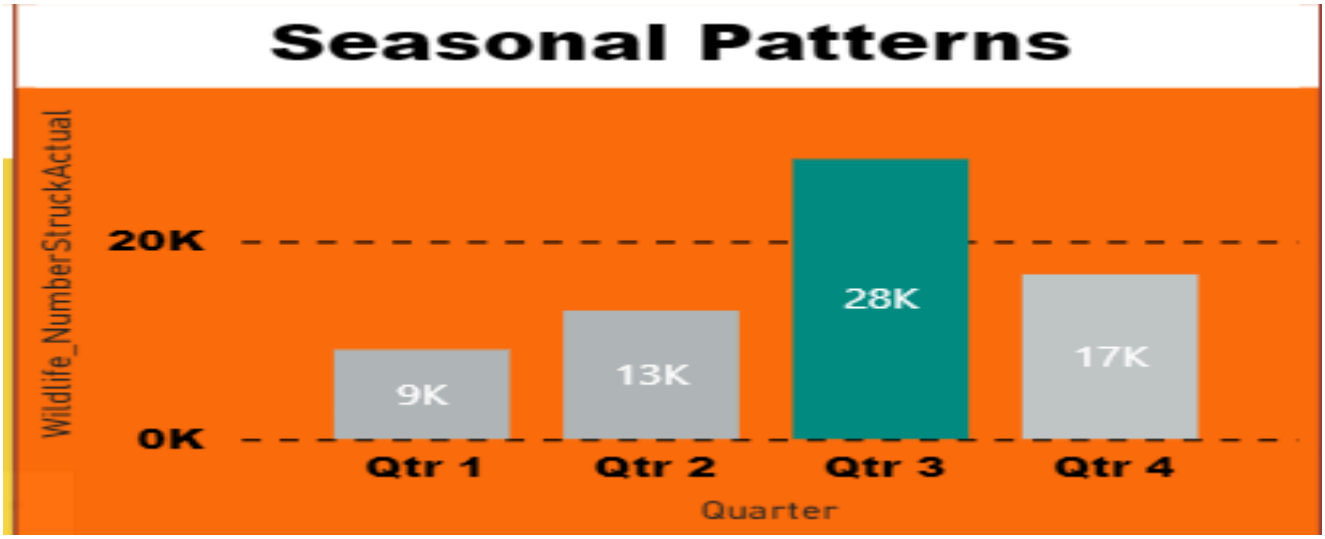
DATASET:
Animal dataset - https://github.com/stuti-sharma/Wildlife-Strike-Analysis-Power-BI/blob/master/WildLife%20Strikes_Complete_Data.xlsx

Objectives:
1. To create visually appealing and interactive dashboards that provide insights into the dataset.
2. To explore the distribution, trends, and relationships within the dataset using various types of visualizations.
3. To enable data-driven storytelling by highlighting key patterns, anomalies, and correlations.

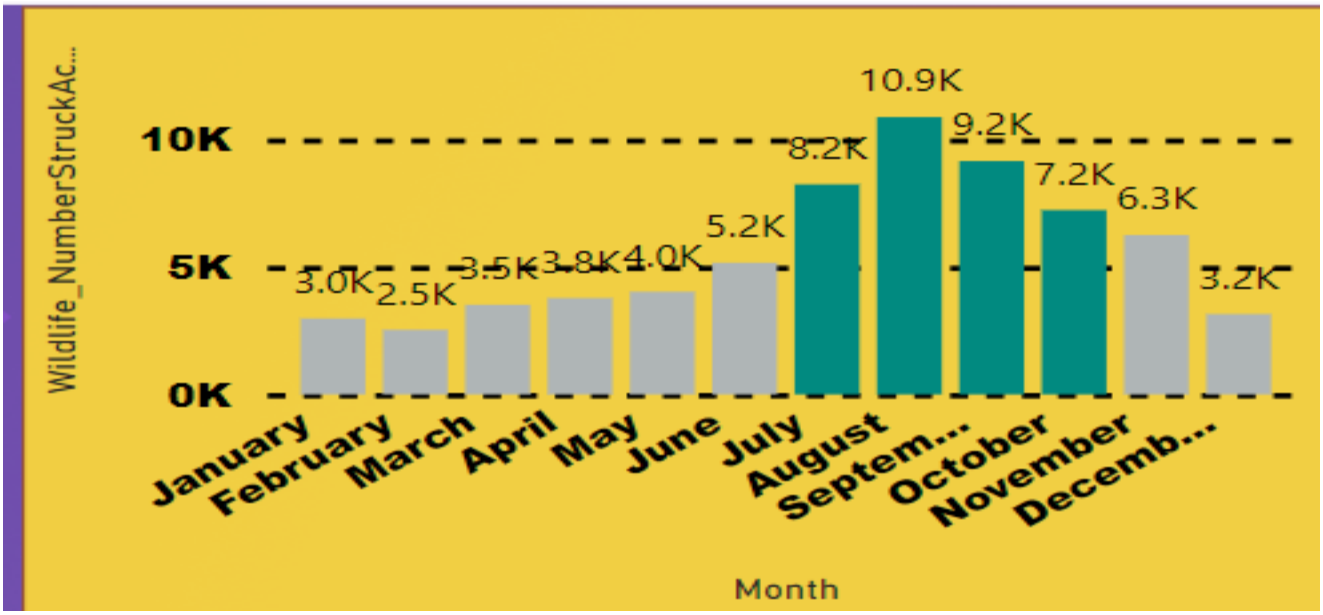
DATASET DESCRIPTION: Wildlife strike is a common scenario and can be a significant threat to aircraft safety. Wildlife Strike is the collision between the animals and the aircraft, either in flight, take-off, or landing. Data collected on Wildlife Strike in U.S.A by Federal Aviation Administration (FAA) is from 2000-2011. FAA is a national authority which regulates all aspect of civil aviation. The visualization tool used is Microsoft Power BI (Business Intelligence). The dataset has 25194 instances and 26 columns.



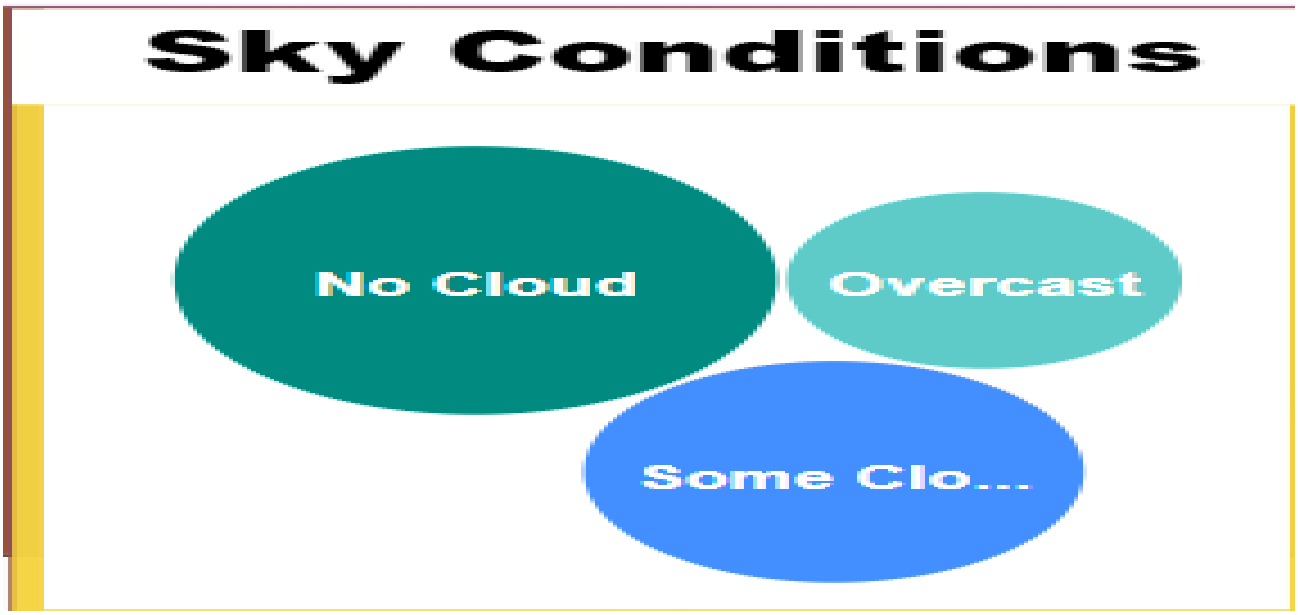
1. **Precipitation Conditions (Donut Chart):** The data highlights different weather conditions and their prevalence. A significant majority of the days are marked by no precipitation, as represented by the large portion of the chart in teal (None). Rainfall, depicted in orange, contributes a small but notable portion, while fog (brown) and snow (purple) are rare occurrences. The chart suggests that clear days are far more frequent, with only occasional disruptions from rain or other conditions.



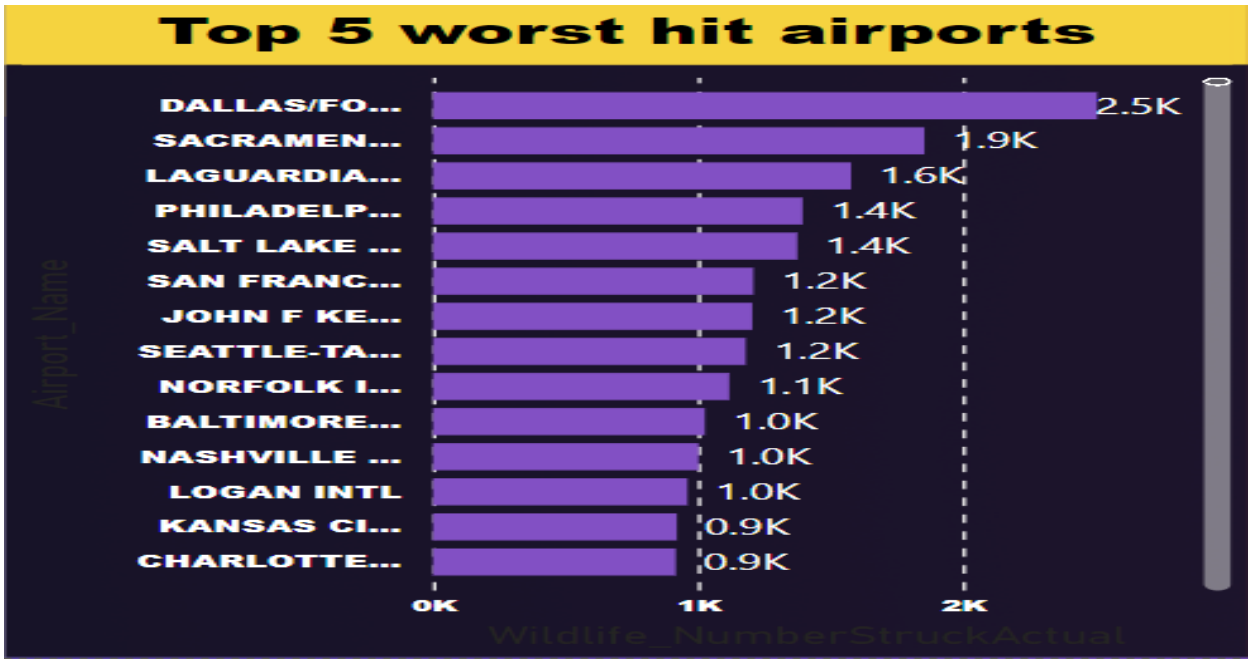
2. Seasonal Patterns (Bar Chart): This chart illustrates wildlife strike incidents across different quarters of the year. The number of incidents significantly rises in the third quarter (Q3), peaking at 28K. This may correspond to the summer months when wildlife is more active. The first quarter (Q1) has the fewest incidents (9K), while Q2 and Q4 show moderate activity with 13K and 17K incidents respectively. This seasonal variation hints at increased wildlife interactions during warmer periods, necessitating heightened awareness during Q3.



3. Monthly Wildlife Strikes (Bar Chart): The monthly breakdown reveals a similar trend in wildlife strikes, with peaks occurring in September (10.9K) and August (9.2K). There's a gradual build-up from the early months, where January through June experience fewer strikes, followed by a sharp increase in the summer and early autumn months. After September, the numbers decline, with December witnessing a steep drop to 3.2K strikes. This monthly view reinforces the heightened wildlife activity during late summer and early autumn.

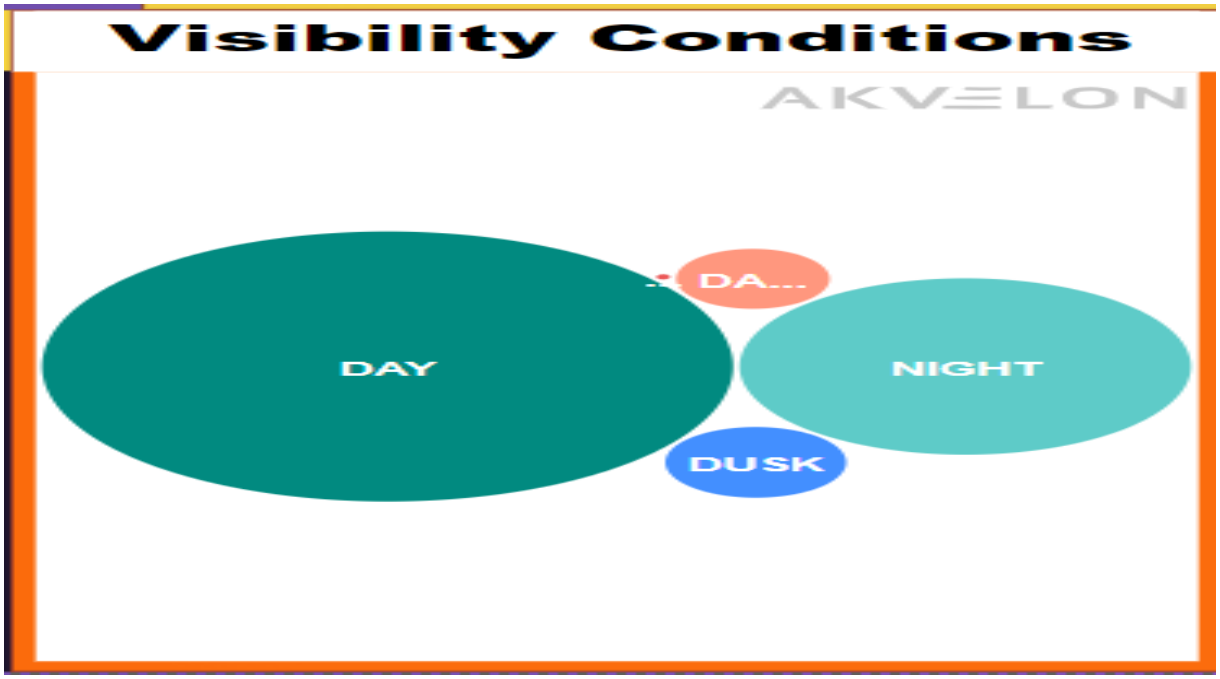


4. Imagine waking up and looking out your window to check the sky. Most days, you'll see a perfectly clear sky, as indicated by the largest bubble—'No Cloud' dominates, showing that cloud-free days are common. However, there are times when the sky is completely covered in clouds—represented by the medium-sized bubble 'Overcast.' But in between those extremes, there are days with scattered clouds, neither too clear nor fully overcast. The bubble 'Some Cloud' reflects those days, where the sun peeks through the clouds, offering a balanced mix.



5. Top 5 Worst Hit Airports:

   The skies were chaotic as Dallas/Fort Worth International Airport faced its toughest year yet. With 2,500 disrupted flights, it claimed the unfortunate title of America's most troubled airport. Sacramento and LaGuardia weren't far behind, leaving frustrated passengers and frazzled staff in their wake. As the turbulent data spread across the country, even smaller airports like Charlotte felt the ripple effects of delays and cancellations.



6. Visibility Conditions:

   The day stretched long and bright, dominating the clock face of time. As evening approached, dusk crept in stealthily, a brief interlude between light and shadow. Night followed, claiming its substantial share of hours, while dawn whispered briefly at the edge, a fleeting promise of the new day to come. The cycle of visibility ebbed and flowed, nature's own timetable painted in shades of green and blue.

7. Total Cost Incurred per Year:

   The financial rollercoaster of the decade left accountants dizzy. Starting modestly at $5.1M, costs skyrocketed to a heart-stopping $23.2M in just one year. Relief came as expenses plummeted, only to surge again in a wild pattern of peaks and valleys. The finance team watched with bated breath as the numbers climbed once more, wondering if they'd ever find stable ground in this unpredictable fiscal landscape.

CONCLUSION: I have successfully plotted advanced and basic graphs using powerBi and have also shown storytelling.