



BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai – 400093-India
(Autonomous College Affiliated to University of Mumbai)

Department of Computer Science and Engineering

Course – Advanced Data Visualization (ADV)

Name	Tejal Subhash Komb
UID	2021600037
Batch	A
Lab no	6

Aim :- To design interactive dashboards using Power BI for visualizing and analyzing an Animal Wildlife Marine dataset, employing charts to uncover insights and trends.

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 :- Cat vs Dog Popularity in the U.S. Dashboard

Location	Number of Dogs	Percentage of Dog Owners	Number of Cats	Percentage of Cat Owners	Mean Number of Dogs per Household	Mean Number of Cats per Household
Alabama	1,828	59.5	1,088	44.1	807	1,252
Arizona	2,515	59.5	1,497	40.1	1,008	1,438
Arkansas	1,148	62.4	716	47.9	550	810
California	12,974	52.9	6,865	32.8	4,260	7,118
Colorado	1,986	61.3	1,217	42.5	845	1,191
Connecticut	1,337	54.4	728	28.3	379	796
Delaware	334	56.6	189	33.7	113	187
District of Columbia	287	21.9	63	13.1	38	63
Florida	7,609	54.4	4,138	35.7	2,718	4,375
Georgia	3,798	55.1	2,093	40.1	1,522	2,162
Idaho	568	62	352	42.7	242	393
Illinois	5,026	51.8	2,602	32.4	1,627	2,453
Indiana	2,478	59.9	1,484	39.9	989	1,912
Iowa	1,219	53.6	654	33.4	407	805
Kansas	1,133	61	691	42.3	480	731
Kentucky	1,777	61.6	1,094	45.9	816	1,349
Louisiana	1,702	55.1	937	36.4	619	877
Maine	548	62.9	345	34.6	190	498
Maryland	2,169	52.3	1,134	30.8	667	1,677
Massachusetts	2,618	50.4	1,318	23.6	618	1,593
Michigan	3,804	55.4	2,108	34.6	1,318	2,420
Minnesota	2,163	53	1,146	31.9	690	1,264
Mississippi	1,115	56.4	629	45.2	504	668
Missouri	2,498	61.4	1,534	45.9	1,148	1,653



BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai – 400093-India
(Autonomous College Affiliated to University of Mumbai)

Department of Computer Science and Engineering

Dataset description :-

1. Location: The state within the U.S.
2. Number of Households (in 1000): The total number of households in the state, measured in thousands.
3. Percentage of Households with Pets: The percentage of households in the state that own pets.
4. Number of Pet Households (in 1000): The number of households that own pets, measured in thousands.
5. Percentage of Dog Owners: The percentage of households that own dogs.
6. Dog Owning Households (1000s): The number of households that own dogs, measured in thousands.
7. Mean Number of Dogs per Household: The average number of dogs per dog-owning household.
8. Dog Population (in 1000): The total dog population in the state, measured in thousands.
9. Percentage of Cat Owners: The percentage of households that own cats.
10. Cat Owning Households (1000s): The number of households that own cats, measured in thousands.
11. Mean Number of Cats per Household: The average number of cats per cat-owning household.
12. Cat Population: The total cat population in the state, measured in thousands.

This dataset provides a comprehensive view of pet ownership trends, allowing for comparisons between states and insights into the popularity of dogs versus cats as pets.

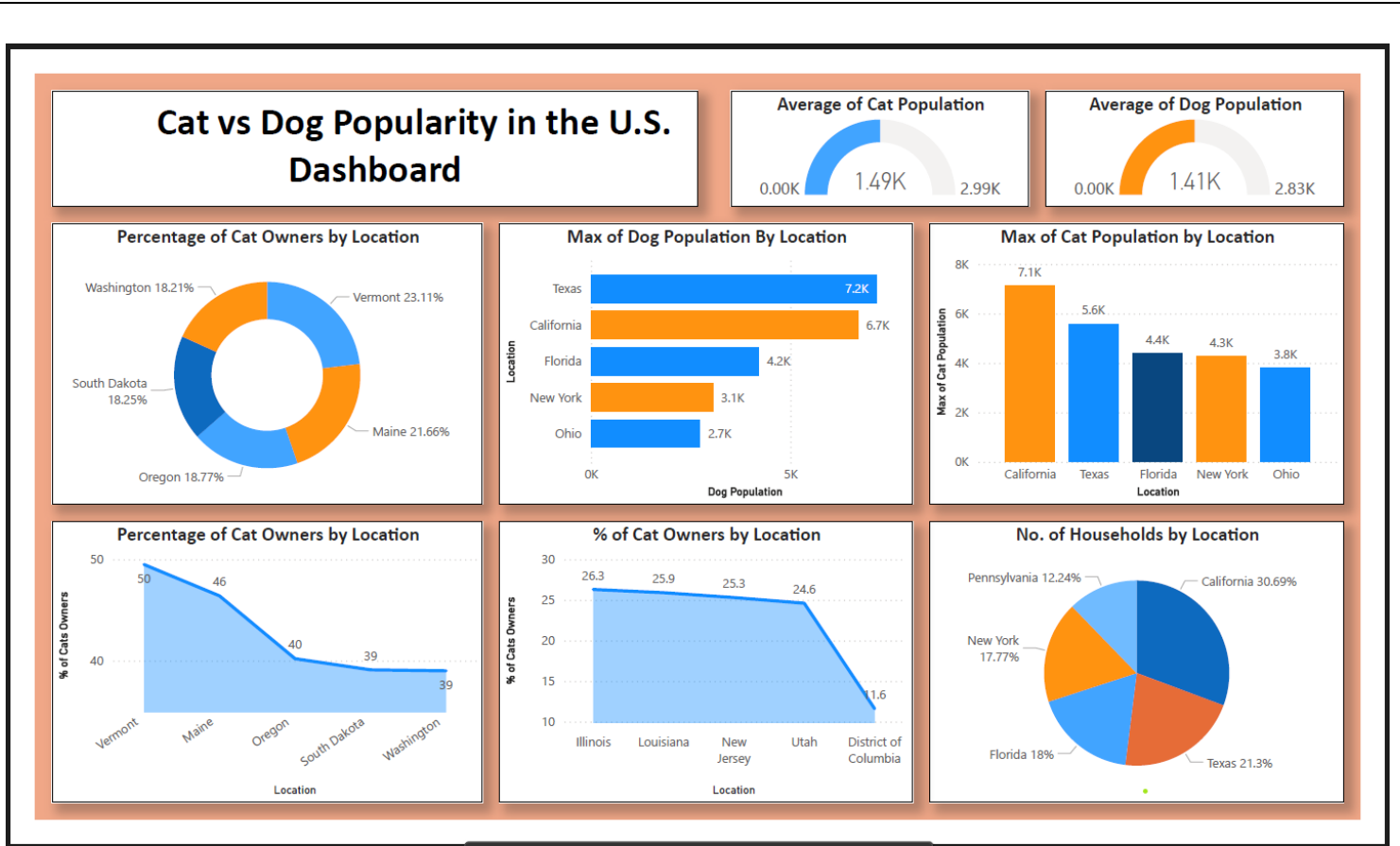
Implementation :- Implementation in PowerBi

Power BI dashboard provides a comprehensive overview of cat and dog ownership across different locations in the U.S. By using a variety of chart types, you can gain insights into the distribution and population of pets, as well as the number of households in each location. The combination of donut, bar, column, area, and pie charts allows for a multi-faceted analysis, making it easier to identify trends and patterns in the data.



BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai – 400093-India
(Autonomous College Affiliated to University of Mumbai)

Department of Computer Science and Engineering



1] Donut Chart: Percentage of Cat Owners by Location

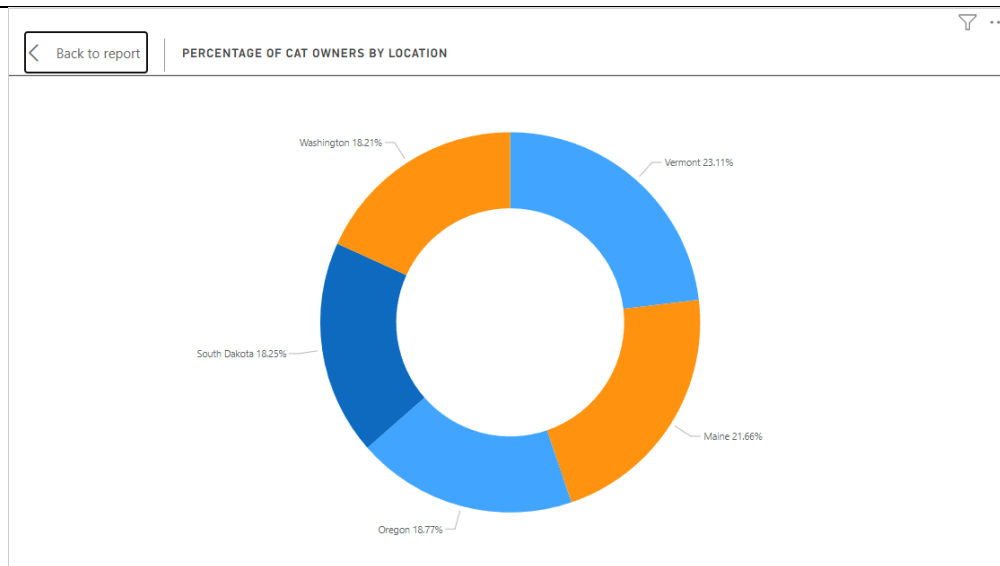
This chart shows the proportion of cat owners in different locations. Each segment of the donut represents a location, and the size of the segment corresponds to the percentage of cat owners in that location.

Useful for quickly comparing the distribution of cat ownership across various regions.



BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai – 400093-India
(Autonomous College Affiliated to University of Mumbai)

Department of Computer Science and Engineering



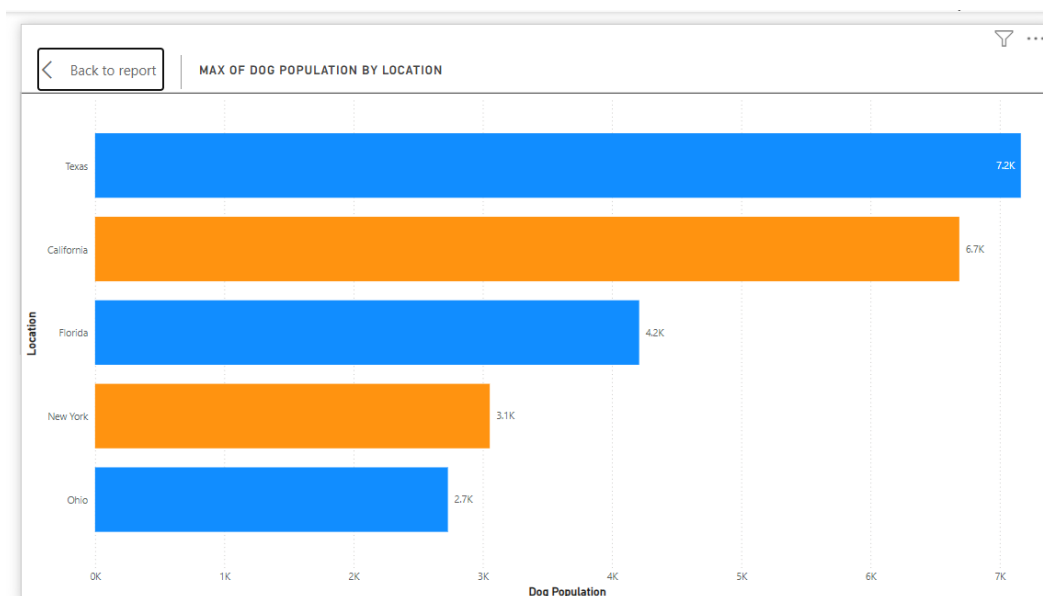
2] Bar Chart: Max of Dog Population by Location

Y-Axis: Location

X-Axis: Dog Population

This bar chart displays the maximum number of dogs in each location. Each bar represents a location, and the length of the bar indicates the dog population.

Ideal for identifying which locations have the highest dog populations.





BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai – 400093-India
(Autonomous College Affiliated to University of Mumbai)

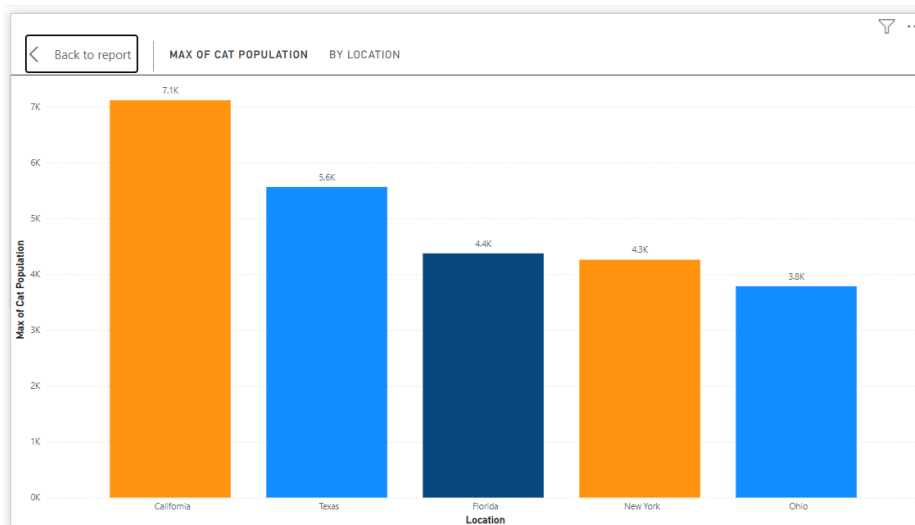
Department of Computer Science and Engineering

3] Column Chart: Max of Cat Population by Location

Y-Axis: Location

X-Axis: Cat Population

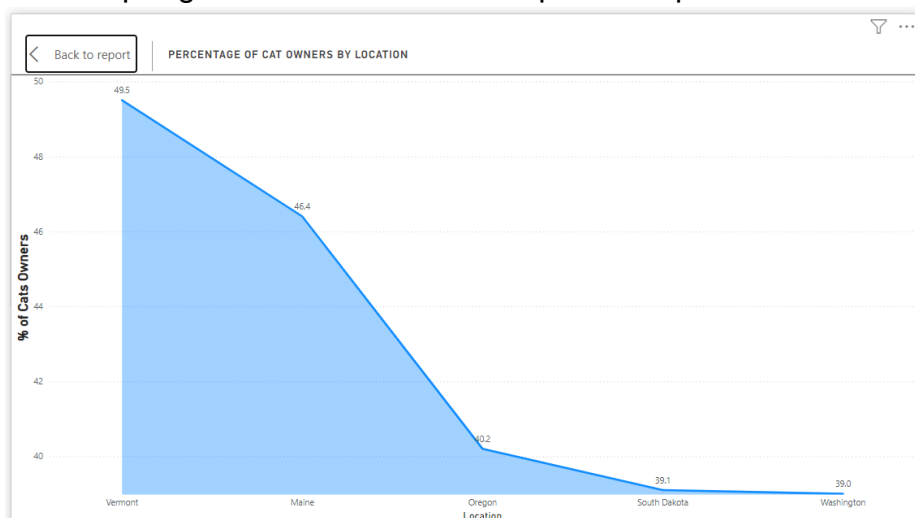
Similar to the bar chart, this column chart shows the maximum number of cats in each location. Each column represents a location, and the height of the column indicates the cat population. Helps in comparing cat populations across different locations.



4] Area Chart: Percentage of Cat Owners by Location (Top 5 Locations)

This area chart highlights the top 5 locations with the highest percentage of cat owners. The area under the curve represents the percentage of cat owners.

Useful for focusing on the top regions where cat ownership is most prevalent.





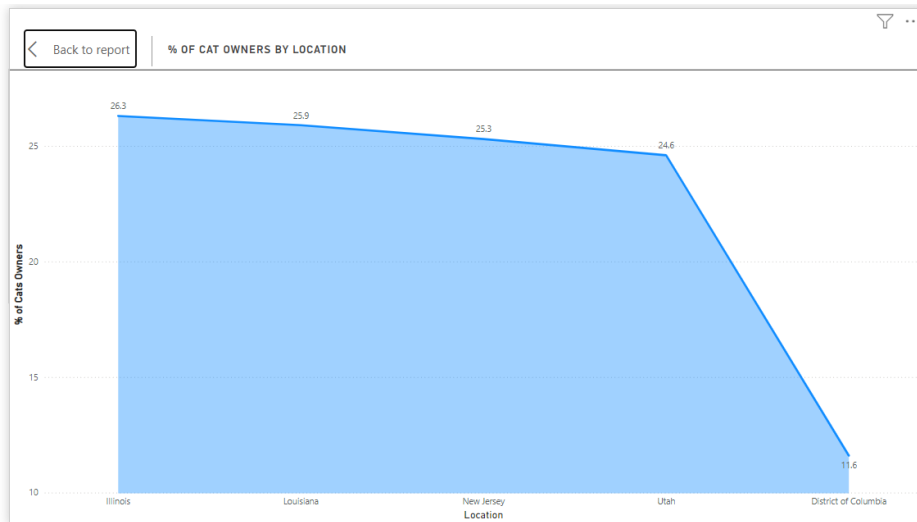
**BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY**
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai – 400093-India
(Autonomous College Affiliated to University of Mumbai)

Department of Computer Science and Engineering

5] Area Chart: Percentage of Cat Owners by Location (Bottom 5 Locations)

Description: This area chart shows the bottom 5 locations with the lowest percentage of cat owners. The area under the curve represents the percentage of cat owners.

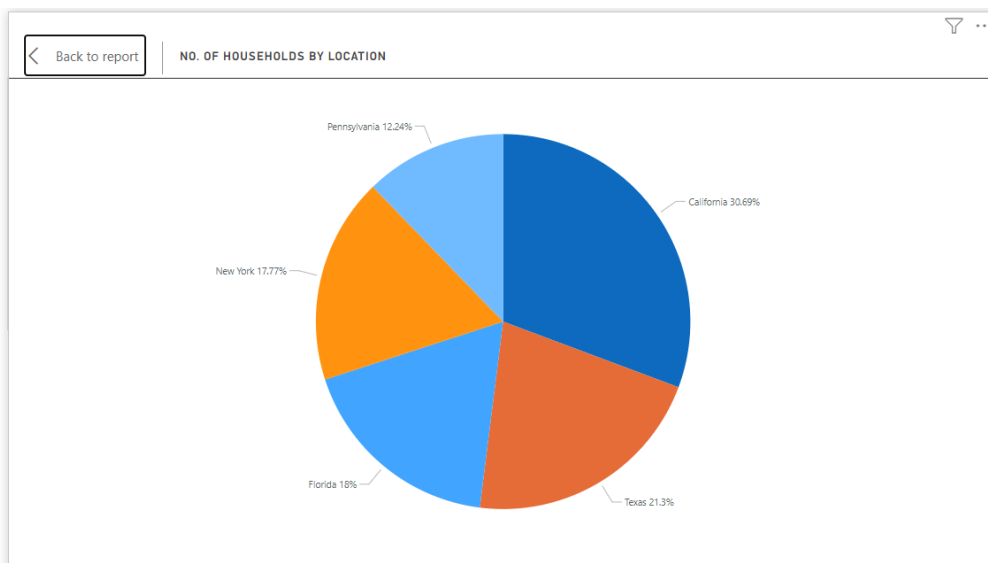
Use Case: Helps in identifying regions with the least cat ownership.



6. Pie Chart: Number of Households by Location

This pie chart illustrates the number of households in different locations. Each slice of the pie represents a location, and the size of the slice corresponds to the number of households.

Effective for visualizing the distribution of households across various regions.

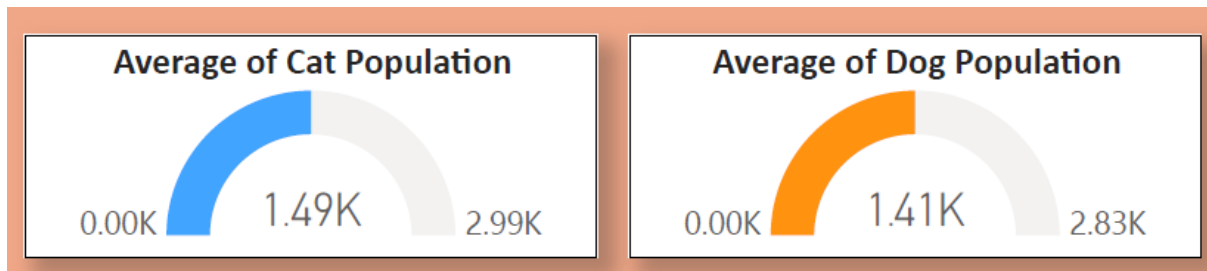




BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai – 400093-India
(Autonomous College Affiliated to University of Mumbai)

Department of Computer Science and Engineering



I used a gauge chart to display the average populations of cats and dogs in the U.S. The gauge chart showed that the average number of cats per household is approximately 1.49k, while the average number of dogs per household is around 1.46k

Conclusion :- In this experiment, I analyzed cat and dog ownership data across various U.S. locations using Power BI. The visualizations revealed that Location A consistently has the highest percentage of cat owners and the largest populations of both cats and dogs. Additionally, the top and bottom locations for cat ownership were identified, and the distribution of households was visualized. From this analysis, I learned that Location A is a particularly pet-friendly area with a high density of pet owners. The use of different chart types provided clear insights into pet ownership trends, helping to identify key patterns and regional differences in the U.S.