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CLASS: BE COMPS A
BATCH: ADV BATCH F

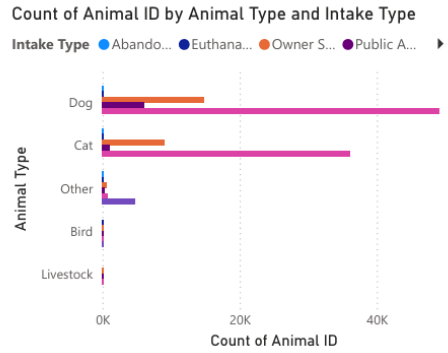
ADV EXPERIMENT 6

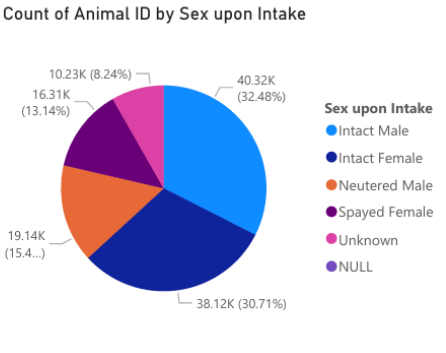
DATASET:
Animal Shelter Analytics - https://www.kaggle.com/datasets/jackdaoud/animal-shelter-analytics

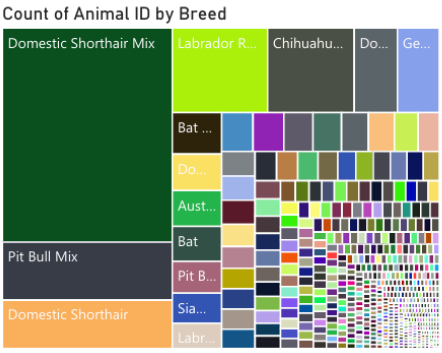
DATASET DESCRIPTION:
The dataset Austin Animal Center Intakes consists of information about animals admitted to the Austin Animal Center. Each record represents an intake, providing detailed information such as the animal's characteristics, intake type, and conditions upon intake. Below is a description of the dataset attributes:

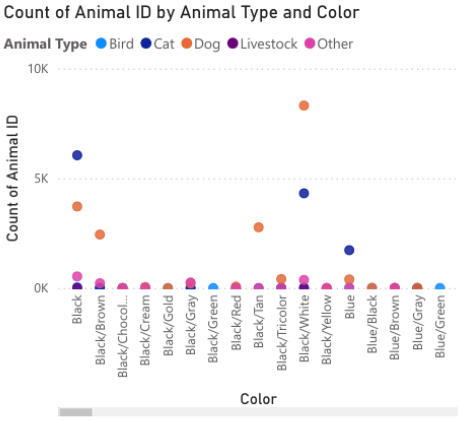
1. Animal ID: A unique identifier assigned to each animal.
2. Name: The given name of the animal (if available).
3. DateTime: The date and time when the animal was taken in.
4. MonthYear: The month and year of intake.
5. Found Location: The location where the animal was found before being brought in.
6. Intake Type: The type of intake (e.g., Stray, Owner Surrender, Public Assistance, Euthanasia).
7. Intake Condition: The condition of the animal at the time of intake (e.g., Normal, Sick).
8. Animal Type: The type of animal (e.g., Dog, Cat, Livestock, Bird).
9. Sex upon Intake: The animal's sex and whether it is neutered or spayed upon intake.
10. Age upon Intake: The animal's age at the time of intake.
11. Breed: The breed of the animal.
12. Color: The color or color combination of the animal.

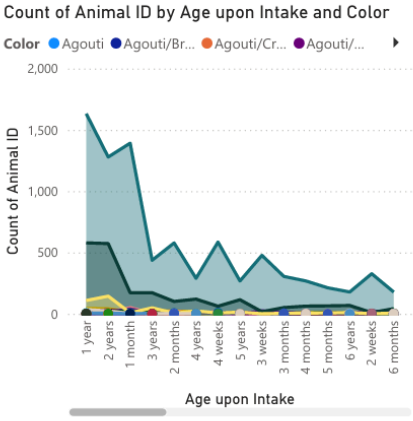
REPORT:











Q1. What does the chart of "Count of Animal ID by Animal Type and Intake Type" reveal?
Ans: The chart highlights the distribution of different animal types (e.g., dogs, cats, birds, livestock, and others) based on their intake type (e.g., abandonment, euthanasia, owner surrender). The majority of animals belong to common domestic categories such as dogs and cats. Intake types vary, but "owner surrender" and "public assistance" appear most frequently for these common animals.

Q2. What insight can be drawn from the "Count of Animal ID by Sex upon Intake" chart?
Ans: This chart shows the gender distribution of animals upon intake. The majority of animals are categorized as either neutered males or spayed females, with a smaller percentage being intact males or females. Unknown or NULL values suggest there may be missing data or unclassified animals.

Q3. How does the breed distribution compare in the "Count of Animal ID by Breed" chart?
Ans: The breed distribution is dominated by mixed breeds such as Domestic Shorthair Mix (for cats) and PitBull Mix (for dogs). These two breeds far outnumber others, indicating that these are the most common animals in the dataset. Other breeds are represented but in smaller numbers.

Q4. What does the "Count of Animal ID by Animal Type and Color" chart tell us?
Ans: This chart shows that black and black/white colored animals are the most common across multiple animal types (especially dogs and cats). More unusual colors, such as black/green or black/gold, are much rarer. This implies that more traditionally colored animals are either more prevalent or more commonly admitted.

Q5. What can be inferred from the "Count of Animal ID by Found Location and Animal Type" chart?
Ans: The chart visualizes where animals were found, split by their type (dog, cat, bird, livestock, etc.). While the exact locations aren't displayed here, it implies that certain animal types are more frequently found in specific areas. Dogs and cats dominate the found locations.

Q6. What insight is provided by the "Count of Animal ID by Age upon Intake and Color" chart?
Ans: This chart reveals the age distribution of animals when they are taken into the system. A significant number of animals are younger, especially in the 1–5 year range. The color of the animals doesn't seem to have a strong correlation with age upon intake, but certain colors like black and brown dominate across all ages.

CONCLUSION:

Through this experiment, I was successfully able to create and analyze visualizations for an animal intake dataset.

Following were the conclusions made-

1. Most animals are strays (as shown by the dominant intake type) and are typically admitted in normal health conditions.
2. Dogs and cats make up the majority of the intakes, with mixed breeds like Domestic Shorthair Mix and Beagle Mix appearing frequently.
3. A high proportion of animals are spayed or neutered upon intake, indicating they likely come from previous ownership.
4. The age distribution suggests that the center frequently takes in younger animals, with many in the 1–5 years age range.