

INSIGHTS FROM PET DATA ANALYSIS: UNDERSTANDING CAT & DOG TRENDS

KEY FINDINGS & BUSINESS RECOMMENDATIONS

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A close-up, high-resolution photograph of a cat's face, focusing on its right eye and nose. The cat has a light blue eye and a pink nose. Its fur is a mix of grey, white, and brown, with some darker spots. The background is a soft, out-of-focus grey.

Purpose of Analysis:

- ☐ To analyze pet data (cats & dogs) to identify trends
- ☐ Understand breed popularity, temperament, and other key factors

Key Questions:

- ☐ What are the most and least popular breeds?
- ☐ What is the relationship between temperament and sales?
- ☐ How do fur types and breed groups affect pet trends?

Pet Dataset Overview & Methodology

❑ Pet datasets:

- 66 cat records in cats characteristics dataset analysed
- 66 cat pet records in cat quantity sold dataset analysed
- 251 dog records in dogs characteristics dataset analysed
- 251 dog pet records in dog quantity sold dataset analysed

❑ Objective:

- To find the factors that affect pet trends and sales

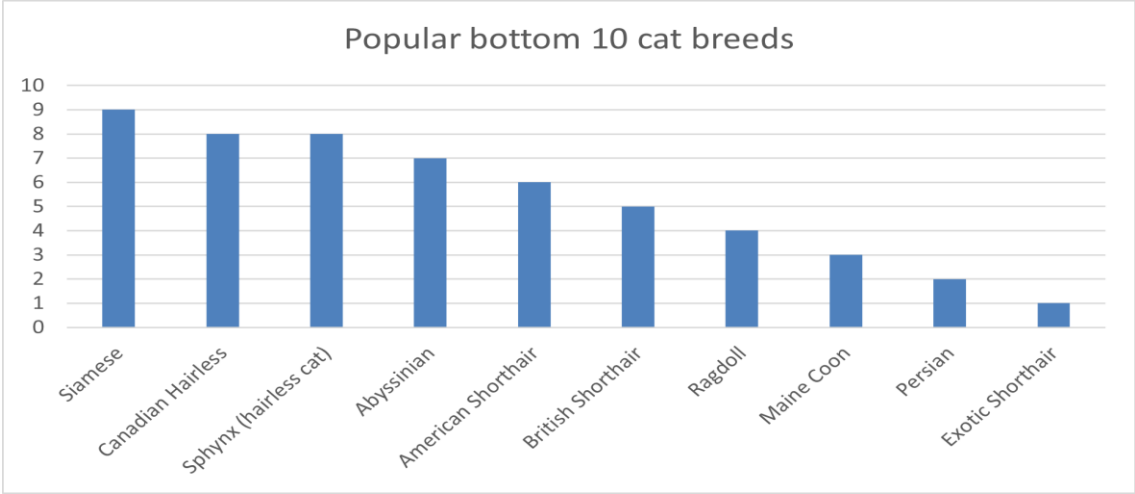
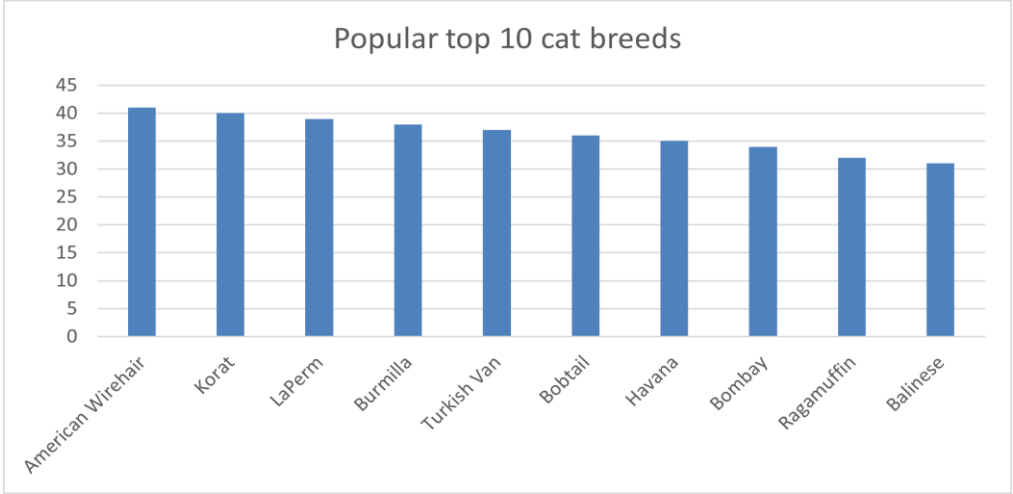
❑ Methodology

- Removed fields that do not contribute to analysis, e.g. AltBreedName
- Removed fields with > 70% of data missing, e.g. MalaysiaPoplarity
- Roved records that have all the fields missing, e.g. Mixed Breed
- Filled PopularityUS2017, AvgKittenPrice, etc. with median
- Merged the cat qty sold of pet records to cat characteristics to extract the qty sold
- Merged the dog qty sold of pet records to dog characteristics to extract the qty sold
- Used PopularityUS2017 as a field to measure popularity

❑ Computations

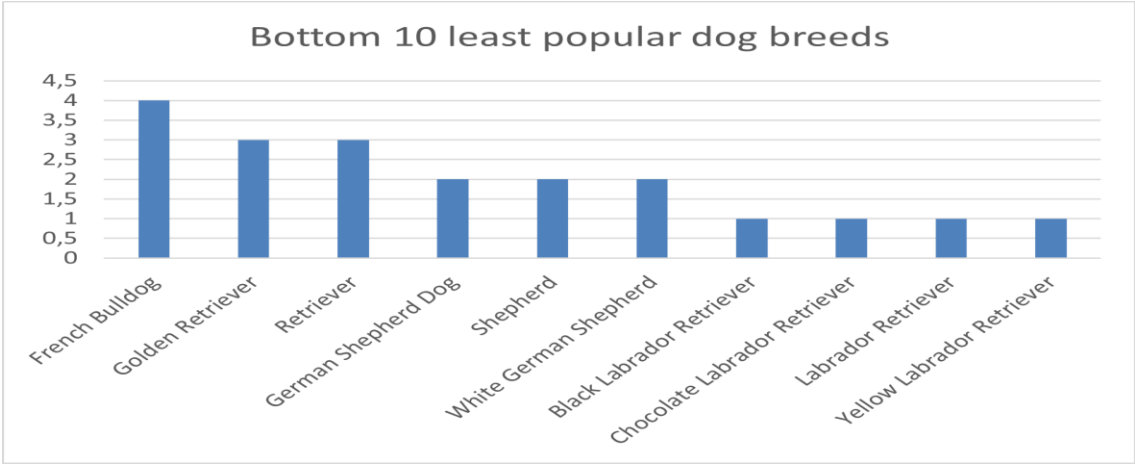
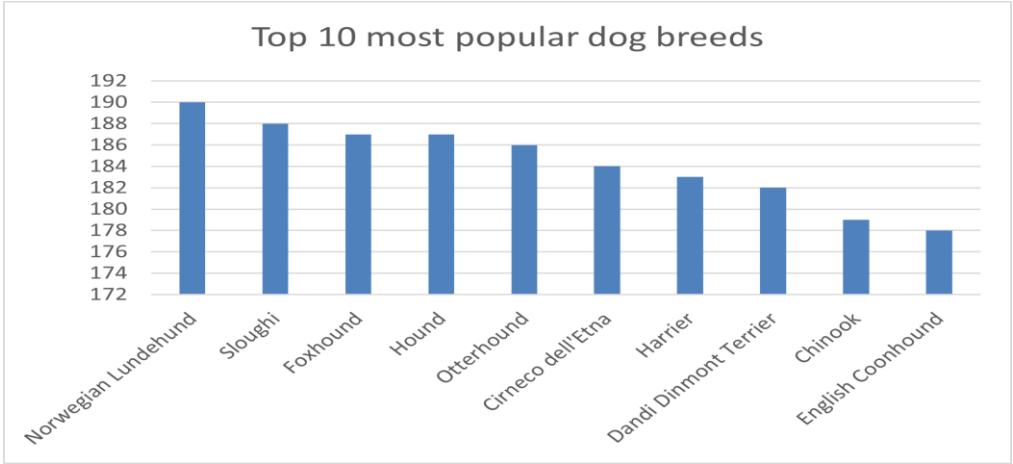
- To compute the top 10 and bottom 10 of popular cats and dogs, I used a combination of Excel functions FILTER(), SORT(), LARGE() and SMALL().

Summary of key findings



- Top 10 most popular cat breeds

- Bottom 10 least popular cat breeds

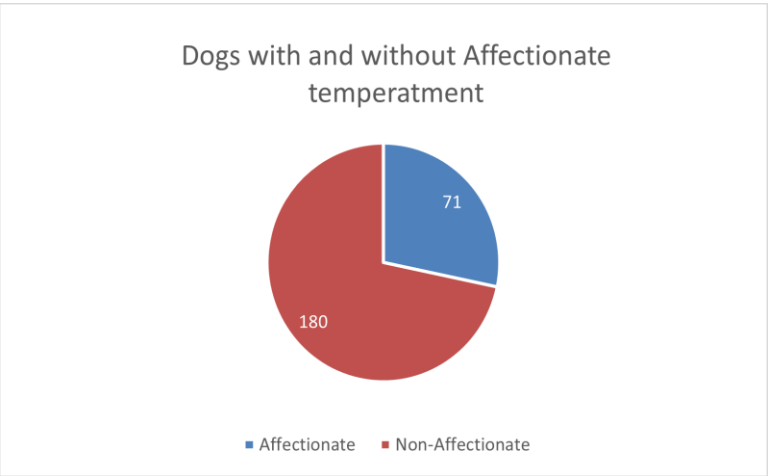
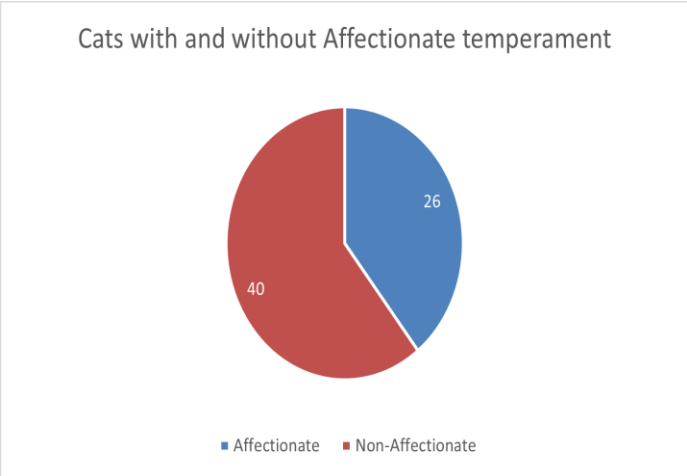


- Top 10 most popular dog breeds

- Bottom 10 least dog breeds

Summary of key findings

❑ Cat and Dog breeds based on Affectionate temperament



- Cats and dogs breeds based on Affectionate temperaments

❑ Average price

a. Top 10 and bottom 10 cat breeds	
Top 10	770,00 €
Bottom 10	1 270,00 €
b. Top and bottom 10 dog breeds	
Top 10	770,00 €
Bottom 10	1 620,00 €

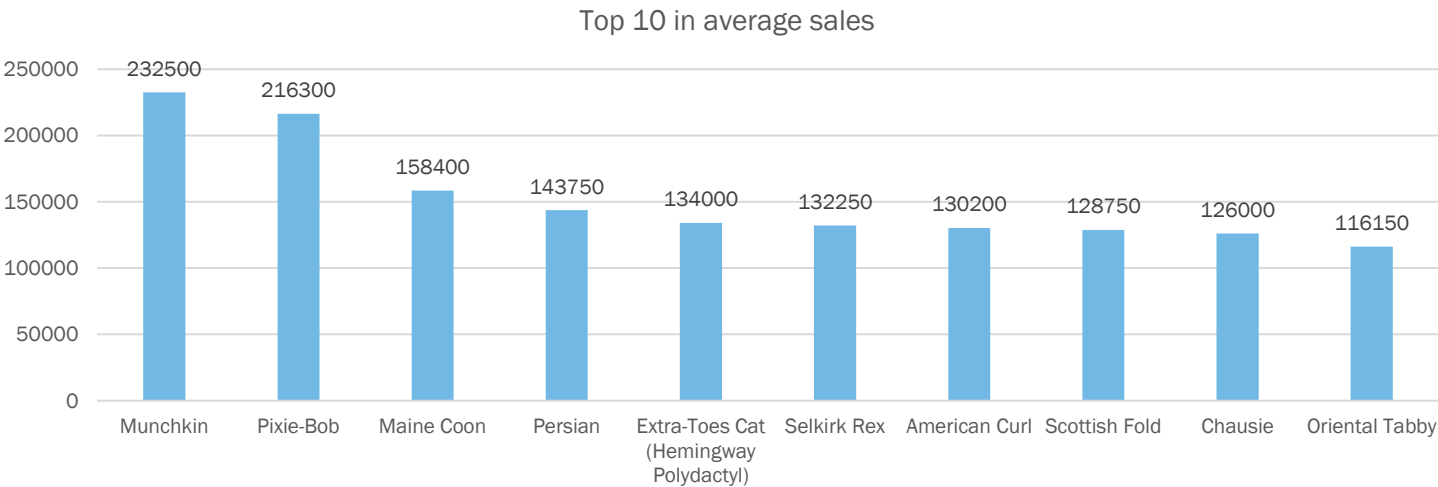
- Average price for top and bottom cat and dog breeds

❑ Top cat and dog breeds based on temperament

Cats	Active, Curious, Easygoing, Playful, Calm
Dogs	Alert, Energetic, Friendly, Independent, Intelligent, Protective

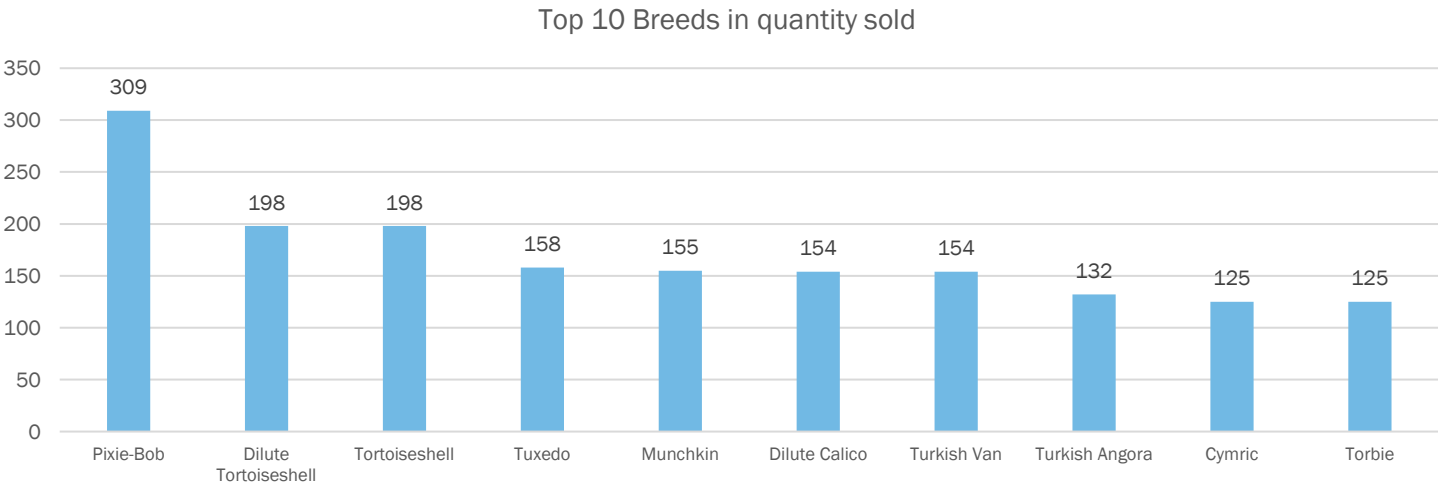
- Top cat and dog breeds based on temperament

Analysis – Top 10 Cat Breeds against Average Sales and Quantity Sold Trends



The graph shows the top 10 cat breeds versus the average sales made. This shows Munchkin comes first with \$232,500, \$216,300 second and so forth with Oriental Tabby breed in the tenth position. These are the breeds that dominate the market in terms of total sales.

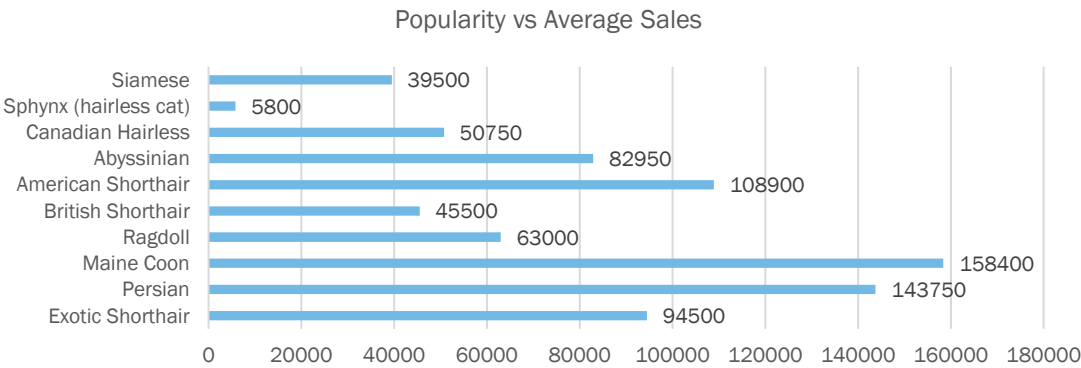
- Top 10 cat breed and average sales



The second graph shows top 10 breeds with the highest quantity of sales made. We can see they are different breeds except Pixie-Bob that comes second in the average sales and first in the quantity sold. Top average sales does not translate into top total quantity of sales.

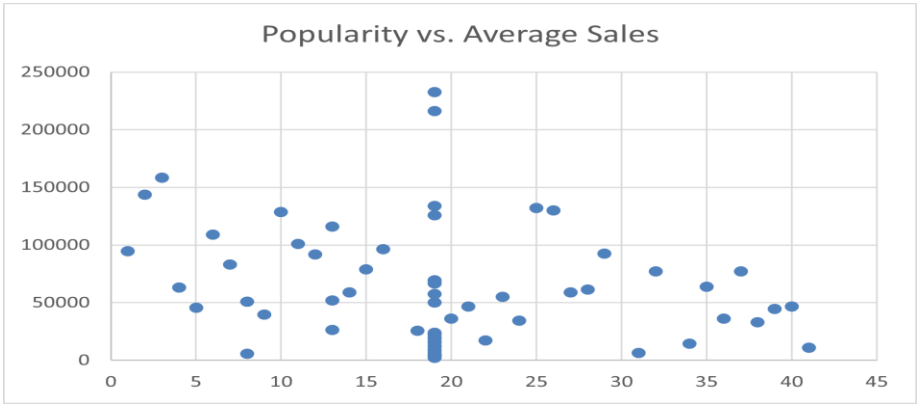
- Top 10 cat breeds and quantity sold

Analysis – Cat Popularity and Temperament verses Average Sales



- Top 10 most popular cat breeds ranging from bottom to top verses average sales

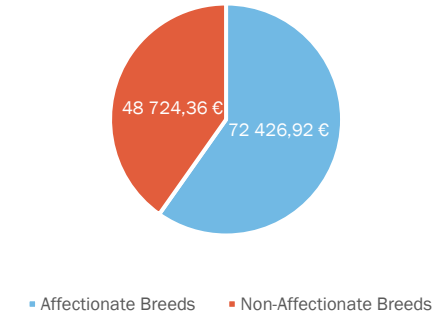
The graph shows that the most popular cat breed Exotic Shorthair is not the breed with the most average sales. Maine Coon which is the third popular and Persian which is the second popular have the highest and second highest average sales here. This performance is not the same when compared to the top 10 breeds verses the averages sales that run into hundreds of thousands of dollars.



- Scatter diagram of cat popularity vs average sales

X axis is the popularity and the y axis the average sales. Lower popularity figures suggest high popularity while higher figures in y axis suggest higher average sales. Some breeds with higher popularity have lower average sales and some lower popular breeds have higher average sales. Some middle popular breeds have varying average sales. This indicates that there is no strong correction between popularity and average sales.

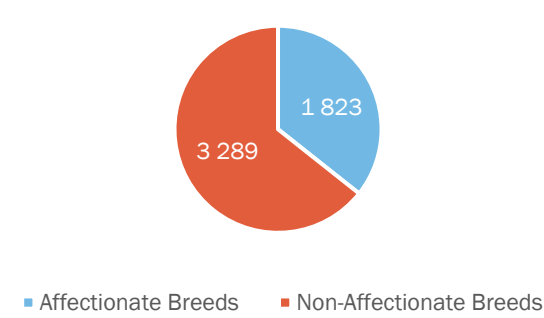
Average Sales of Affectionate vs. Non-Affectionate Breeds



The graph shows that Average Sales of Affectionate Breeds is higher than that of Non-Affectionate Breed. The conclusion is that affectionate temperament increases breed value in cats.

- Average Sales of Affectionate vs. Non-Affectionate Breeds.

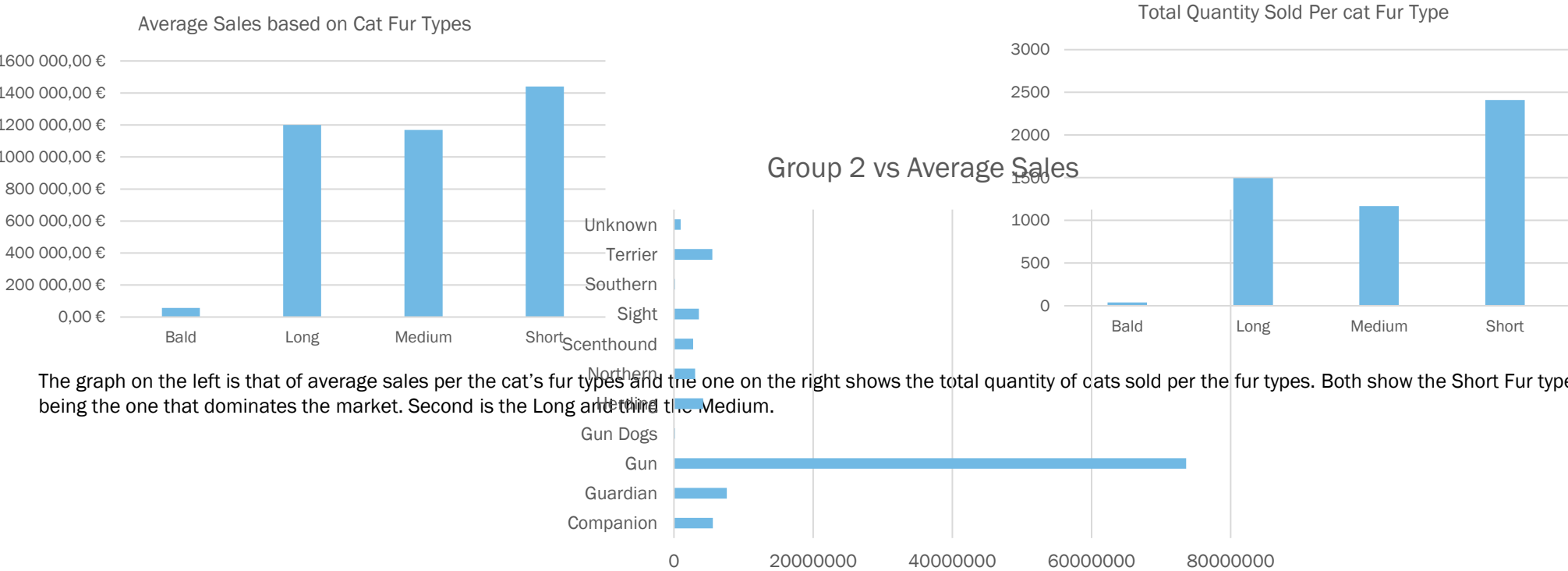
Quantity Sold of Affectionate vs. Non-Affectionate Breeds



The graph shows that Quantity Sold of Non-Affectionate Breeds is higher than that of Affectionate Breed. The prices of Affectionate breeds may be higher to account for the higher Average Sales recorded for the Affectionate temperamental cat breeds.

- Quantity sold of Affectionate vs. Non-Affectionate Breeds.

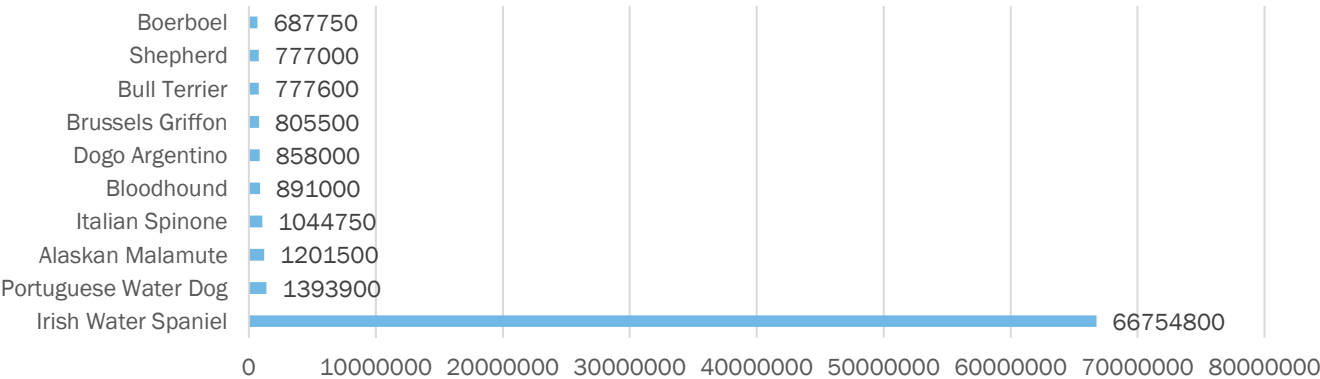
Analysis – Cat Fur & Pet Trends



The graph on the left is that of average sales per the cat's fur types and the one on the right shows the total quantity of cats sold per the fur types. Both show the Short Fur type as being the one that dominates the market. Second is the Long and third the Medium.

Analysis – Top 10 Dog Breeds vs. Average Sales and Quantity Sold Trends

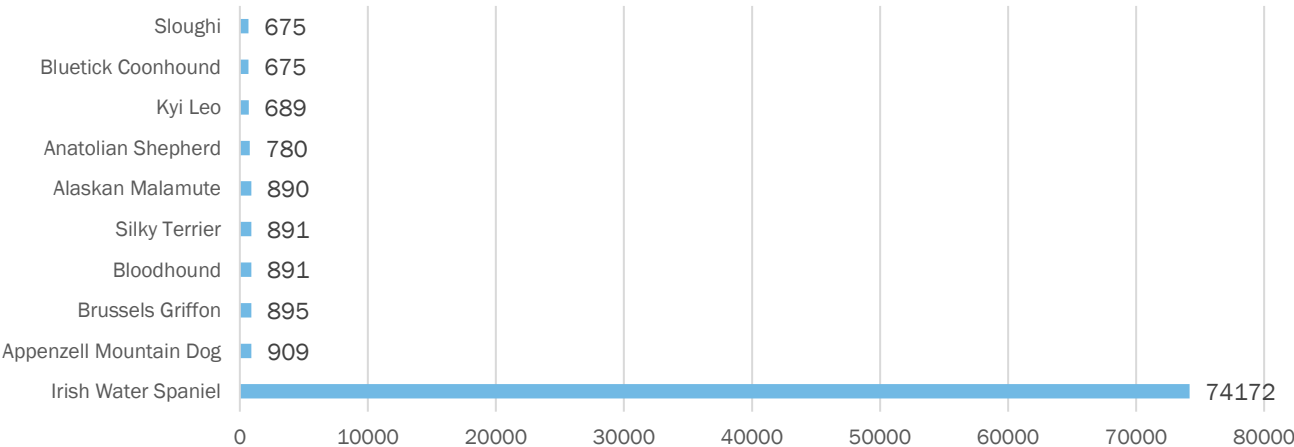
Dog Breeds Average Sales



The graph shows the top 10 dog breeds. Irish Water Spaniel has the highest sales 66,754,800 dollars. I double-checked that this is not an outlier.

- Top 10 dog breeds vs average sales

Dog Breeds vs. Quantity Sold

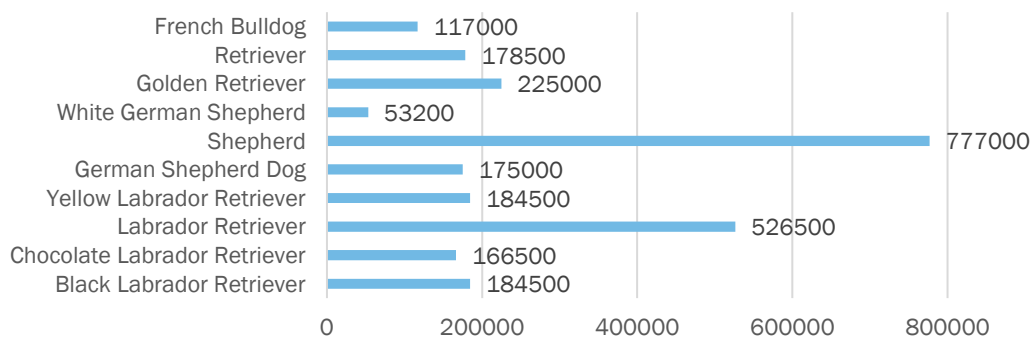


The second graph shows top 10 breeds with the highest quantity of dogs sold. Irish Water Spaniel still comes first with a total of 74,172 dogs sold. This is dominating the market.

- Top 10 dog breeds vs quantity sold

Analysis – Dog Popularity and Temperament vs. Average Sales

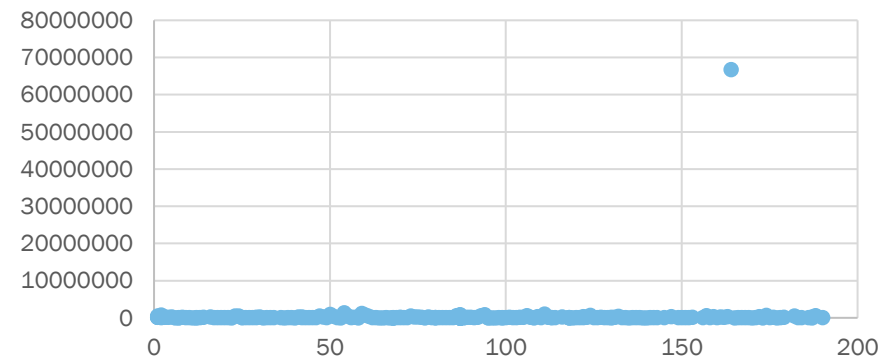
Top 10 most popular dog breeds vs. Average Sales



- Top 10 most popular dog breeds vs. average sales

In the graph above, the 4 bottom breeds have the highest popularity but not the highest average sales. The next 3 are the second highest popularity but only the Shepherd has the highest average sales. We can deduce from here that popularity does not translate into high sales.

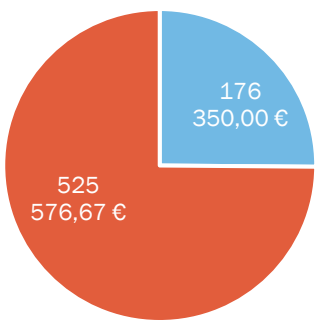
Dog Breeds popularity vs Average Sales



- Scatter diagram of dog popularity vs average sales

X axis is the popularity and the y axis the average sales. Lower popularity figures suggest high popularity while higher figures in y axis suggest higher average sales. There is no correlation between popularity in dog breeds vs the average sales

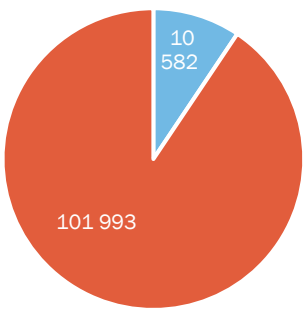
Dog Breeds vs. Average Sales



Affectionate Breeds Non-Affectionate Breeds

- Average Sales of Affectionate vs. Non-Affectionate Breeds.

Dog Breeds vs Chart Title



Affectionate Breeds Non-Affectionate Breeds

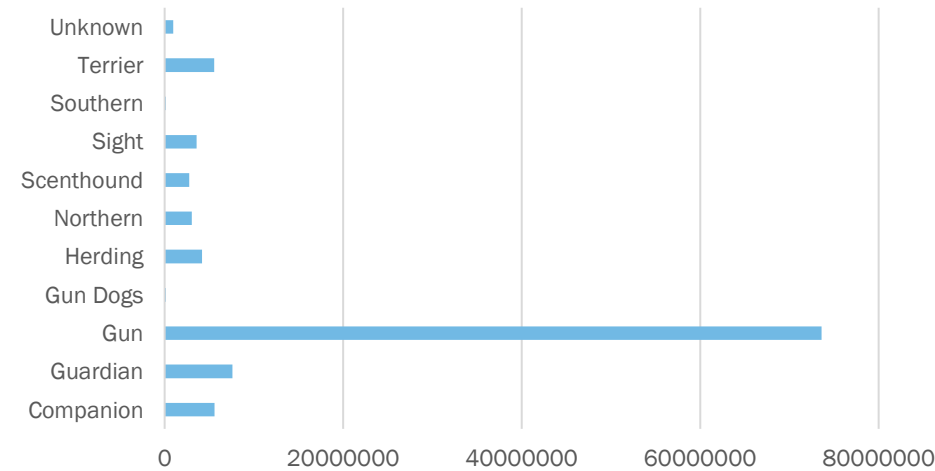
- Quantity sold of Affectionate vs. Non-Affectionate Breeds.

The two pie charts show that Non-Affectionate Breeds have the highest Average Sales and total quantity sold with 528,576.67 dollars and 101,993 total of dogs sold. This contrasts from the cats' where the Affectionate dominate the market.



Analysis – Group 2 & Pet Trends

Group 2 vs Average Sales



From the group we can see that the Gun Breeds of Dog has the highest average sales based on group 2.

RECOMMENDATIONS



Since from the analysis, the most popular breeds of cats and dogs are not the highest in average sales and total quantity sold. On the other hand, the breeds of cats and dogs that make sales are the ones the sellers and breeders should pay more attention in because these are the ones that makes sales.



From the pricing analysis, it is discovered that the average price top 10 breeds for both cats and dogs is 770. Sellers should make sure that their best price is around that average price.



In terms of temperaments, the cats with Active, Curious, Easygoing, Playful and Calm are commonly sold, also Alert, Energetic, Friendly, Independent, Intelligent and Proactive dogs are common. The Breeders and sellers should have this in mind. Generally, speaking the analysis shows that Affectionate temperamental cats dominate the market while on the flip side, the non-affectionate dogs dominate sales

Conclusions



- ❑ We identified the most and least popular breeds.
- ❑ There is no relationship between popularity and sales.
- ❑ Non-affectionate breeds sell more in dogs while the affectionate cats are market dominant.
- ❑ Fur types and breed groups affect sales. For example, for short fur and lap cats together sale.