



Demographics of each state's cats and dogs preferences

General Stats of the Dogs and Cats situations in the United States households

Average number of Dogs in each U.S house hold: 1.614

*Excluding the households that do not own any dog



Top 3 Largest number of dogs in the states

Location (S..	
Oklahoma	2.1
New Mexico	2.0
Arkansas	2.0

Top_5 States with both dogs and cats

Location (S..	
Oklahoma	4.3
Arkansas	4.3
New Mexico	4.2
Alabama	4.2
Tennessee	4.2

Average number of cats in each U.S. house hold: 2.050

*Exluing those households that do not own any cat



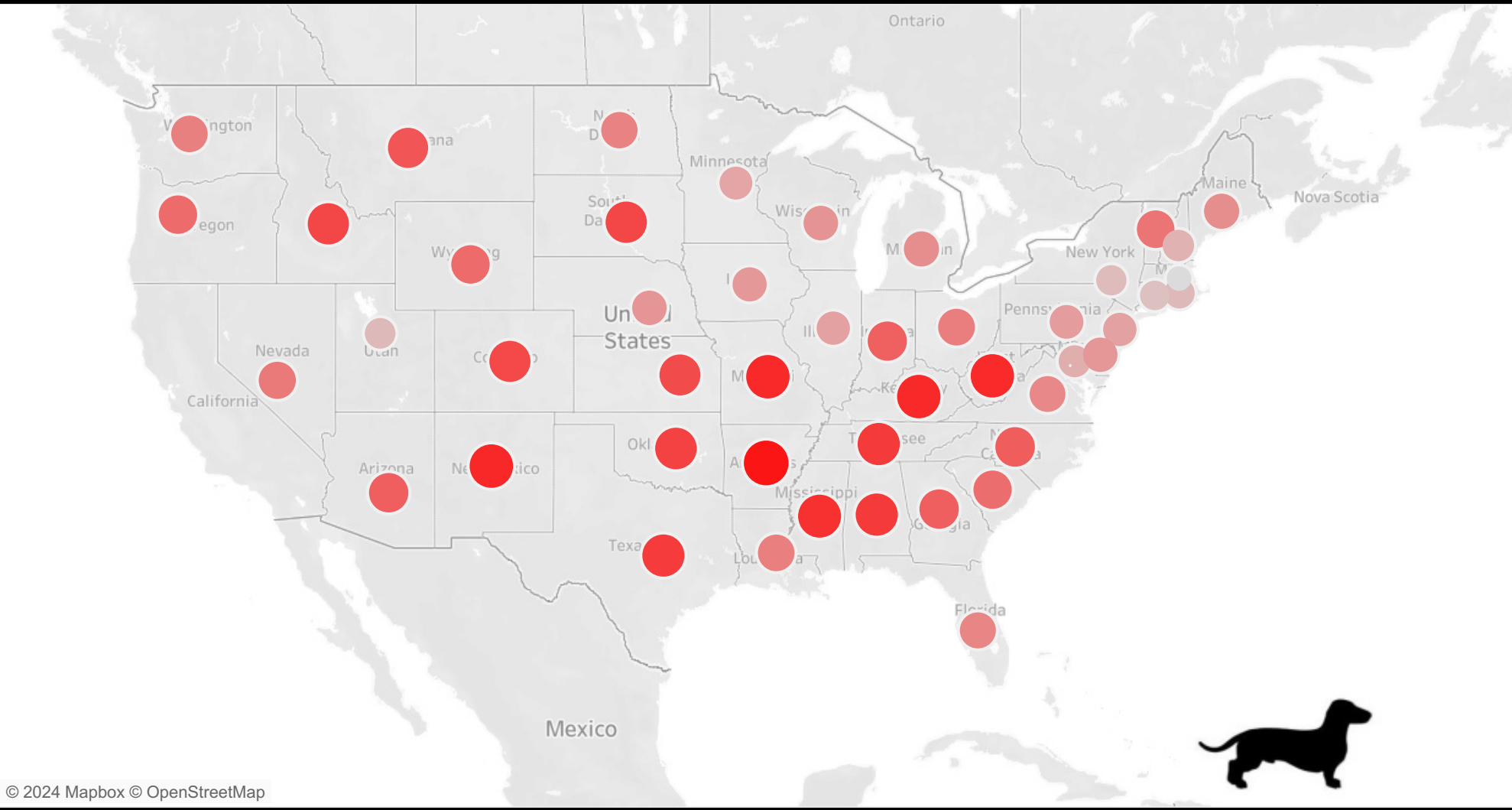
Top 3 largest number of cats of the states:

Location (S..	
Maryland	2.60
Alabama	2.50
Ohio	2.40

Pets, especially dogs and cats, are widely popular across the southern and central U.S. states. Oklahoma leads in dog ownership, with households averaging 2.1 dogs each. New Mexico and Arkansas follow closely, each averaging 2 dogs per household. In terms of cat ownership, Maryland ranks highest, with an average of 2.6 cats per household. Alabama comes in second with 2.5 cats, followed by Ohio at 2.4 cats per household. When considering the total average of both dogs and cats, Oklahoma and Arkansas share the top spot, with an average of 4.3 per household. New Mexico, Alabama, and Tennessee are tied for third, each averaging 4.2 pets per household.

Let's look into the geographical distribution of the dogs and cats owners in the U.S.

Percentage of Dog Owners in each state



Percentage of Dog Owners

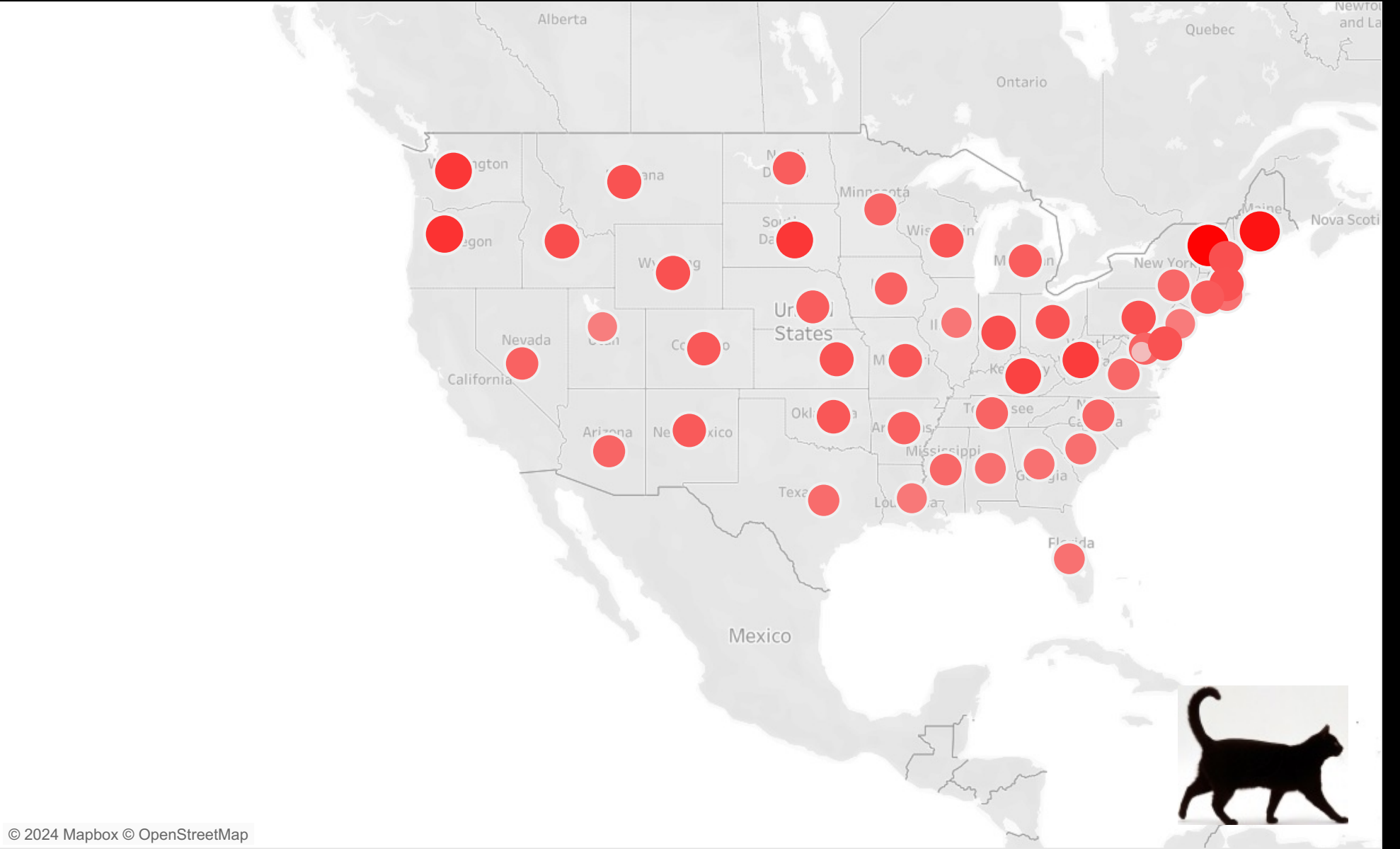
0.00 50.00

We can see the clear trend that the dog ownership is quite popular among the southern and central U.S. states.

Why?

According to author Dewitt, dog ownership is culturally fitting and dog friendly for with the climate and temperature (Dewitt, 2021)

Percentage of Cats Owners in each state



Percentage of Cat Owners

0.00 50.00

Interestingly, cats are significantly more popular in the northern states of the U.S. In Maine and Vermont, nearly 50% of residents are cat owners. Similarly, in Washington and Oregon, approximately 40% of residents have one or more cats.

Now, we know the dog owners more likely reside in the Southern states, and cat owners tend to live in the Northern States. How about the annual income and the number of the pets? - Do they correlate?



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Pearson's correlation

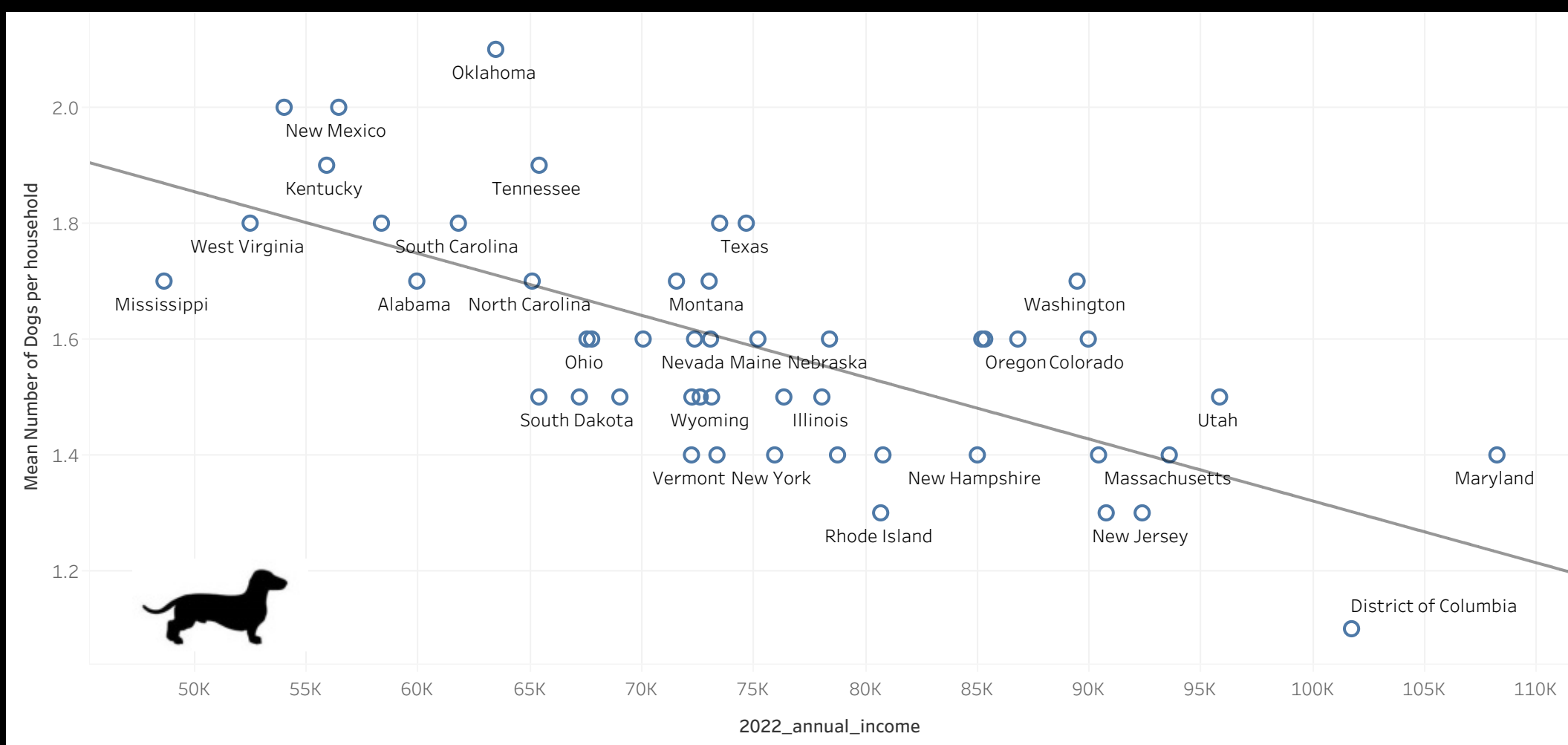
Corr (Cats Owners per state x annual income)	-1.758
Corr (Number of Cats per house x annual income)	-3.327
Corr (Number of Dogs per house x annual income)	-2.873

An intriguing result has emerged: based on the **Pearson's correlation**, annual income shows a negative correlation with both the percentage of dog and cat ownership and the average number of pets per household.

→ The trend suggests that households with **lower incomes** are more likely to own **more dogs and cats**.

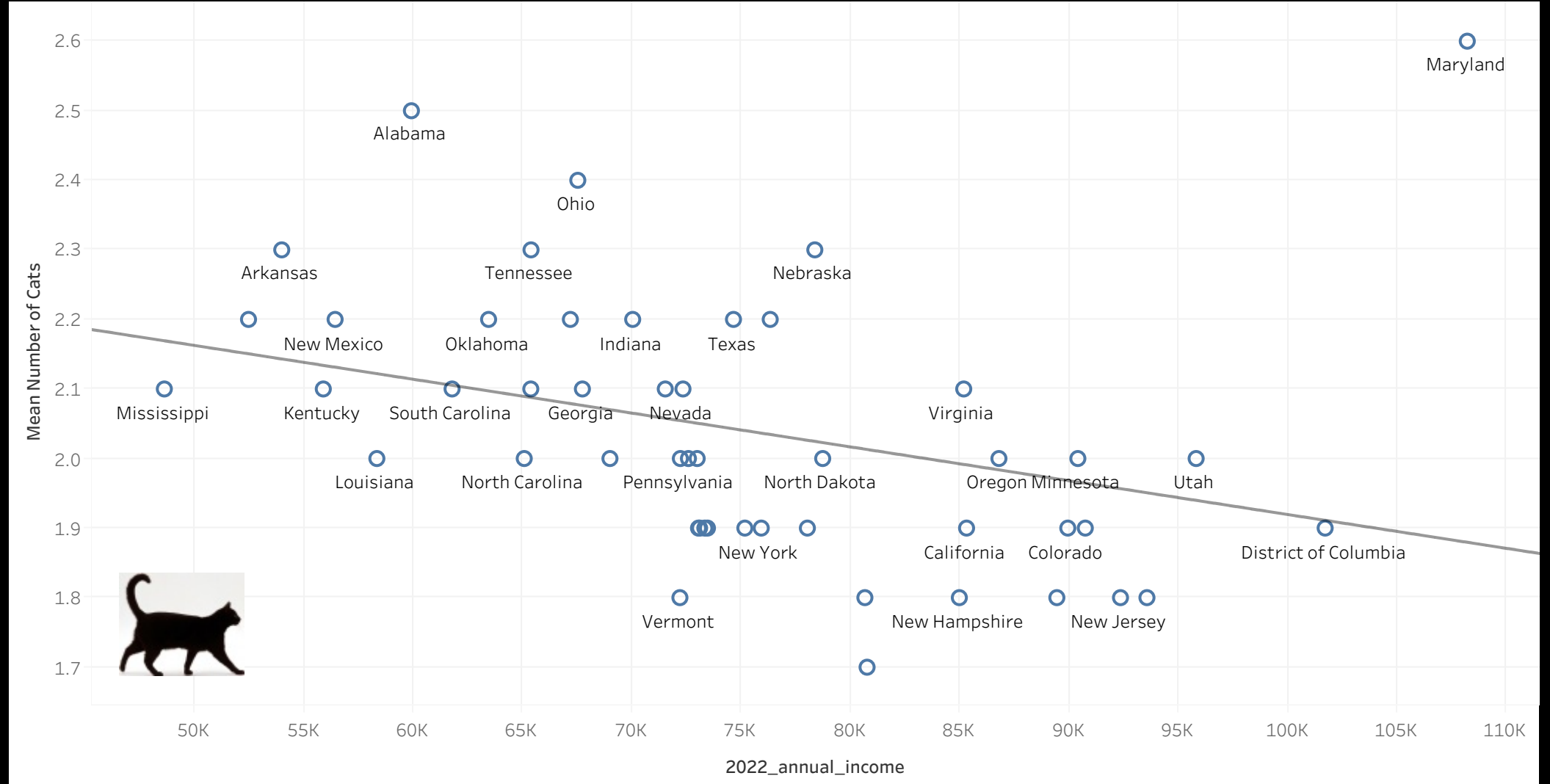
Regression Analysis: number dogs and cats against annual income

Graph 1: Linear Regression Model - number of dogs vs. annual income



Again, it is clear that the higher annual income, the less dogs they are getting.

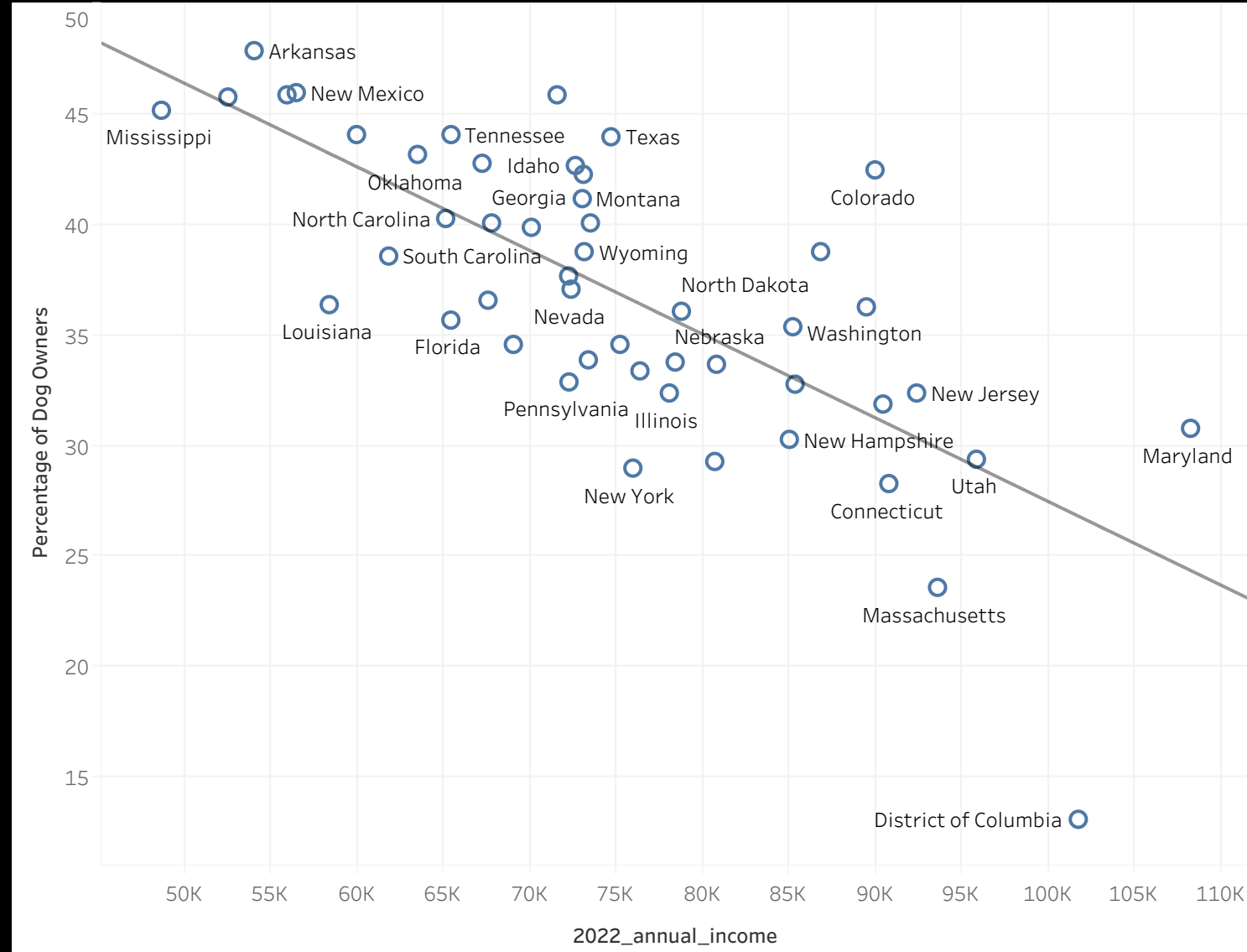
Graph 2 Linear Regression Model - number of cats vs. annual income



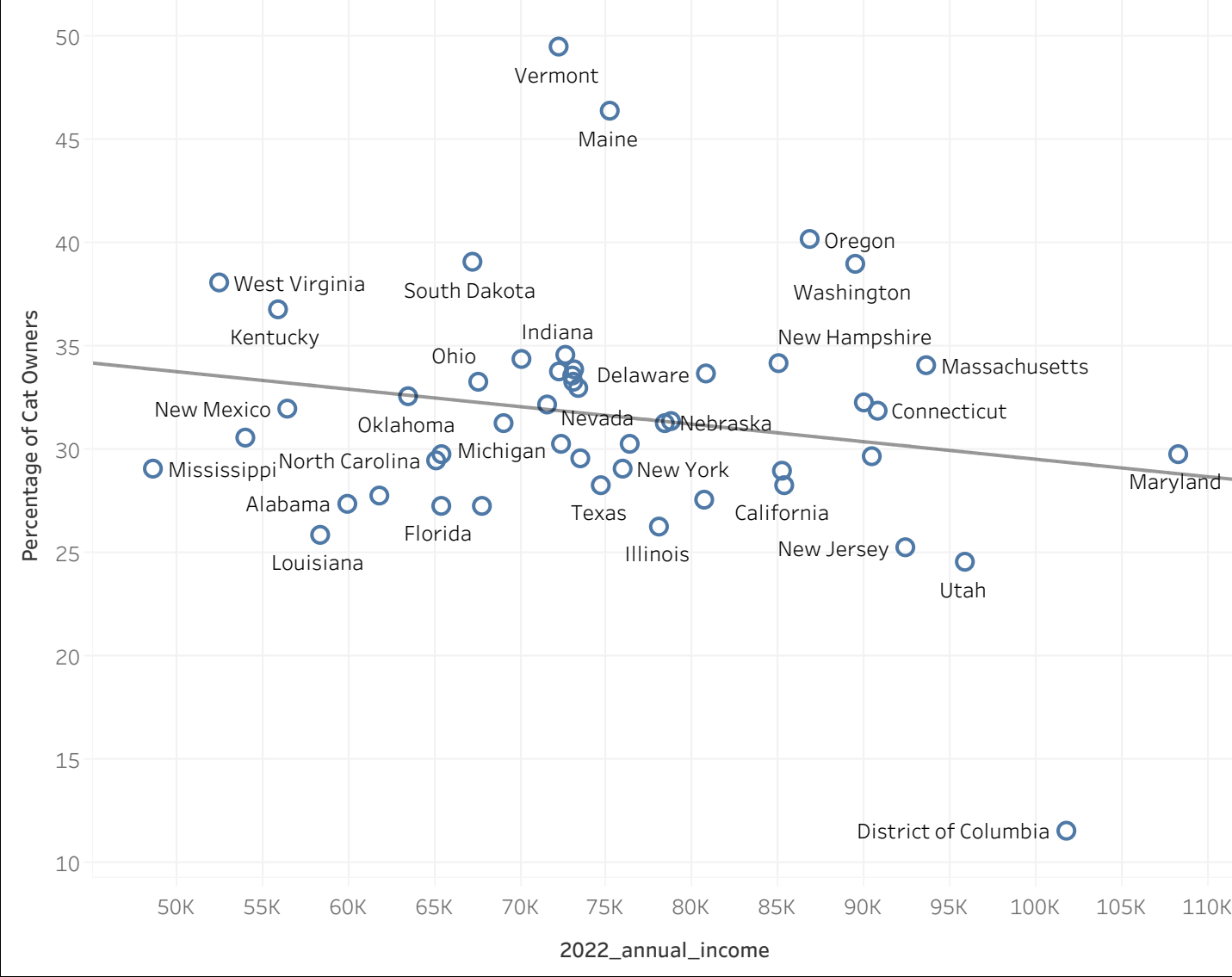
In the linear regression analysis of cat ownership, a similar trend emerges as with dogs: households with higher annual incomes tend to own fewer cats. However, Maryland stands out as an exception. Despite the state's relatively high average annual income of around \$110,000, it exhibits a higher-than-expected average of 2.6 cats per household, deviating from the broader trend. Try clicking and unclicking Maryland box above and see the difference

Regression Analysis: percentage of dogowners and cat owners against annual income

Graph 3: Linear Regression Model - Percentage of dog owners vs. annual income



Graph 4: Linear Regression Model - number of dogs vs. annual income



From the data, we observe a clear trend: as income levels increase, the likelihood of wanting a dog decreases. In contrast, the trend for cat ownership remains relatively stable across income brackets, providing little evidence to support the notion that higher income correlates with a lower preference for cats.

To Data Analysts/Statisticians: Graphs 1, 2, and 3 show p-values below 0.05, indicating statistically significant relationships. However, **Graph 4 has a p-value of 0.182**, suggesting that annual income does not have a significant effect on cat ownership

Recommendation

Dog Products Marketing Strategy:

Data trends show that many dog owners in the U.S. aren't in the highest income brackets, so it's important to keep pricing accessible. A significant portion of dog owners are located in the southern states, where cultural traditions emphasize outdoor activities like hiking, often with their pets. Therefore, when marketing dog products in these regions, it's important to focus on outdoor-related gear in addition to essentials like dog food. Consider promoting items such as:

- Fetching toys (balls, frisbees)
- Leashes and harnesses
- Portable water bottles for hiking
- Dog backpacks

These products resonate with the active lifestyles of southern dog owners and align with the cultural value placed on outdoor adventures with their pets.

Cat Products Marketing Strategy:

For cat products, focus on the northern states where cat ownership is more common, partly due to their historical role in pest control, especially in colder climates. As cats are effective at controlling pests during winter (Otoni et al., 2017), this can be incorporated into marketing strategies. For example:

- Rat-catching accessories alongside cat food
- Essentials like cat food, bundled with products aimed at winter comfort, such as heated beds or insulated shelters
- Winter-themed cat clothing to keep pets warm
- Humidifiers to prevent dry skin in indoor environments with heating

These products cater to the needs of cats in colder regions and appeal to owners concerned with their pets' comfort and well-being during winter.

References

200+ Southern Dog Names [Fun Titles For Your Pup]. (2021, June 21). The Pampered Pup | Treat Your Dog Royally. <https://www.thepamperedpup.com/southern-dog-names/>

Ottoni, C., Van Neer, W., De Cupere, B., Daligault, J., Guimaraes, S., Peters, J., Spassov, N., Prendergast, M. E., Boivin, N., Morales-Muñiz, A., Băilășescu, A., Becker, C., Benecke, N., Boroneant, A., Buitenhuis, H., Chahoud, J., Crowther, A., Llorente, L., Manasyrian, N., & Monéhot, H. (2017). The palaeogenetics of cat dispersal in the ancient world. *Nature Ecology & Evolution*, 1(7). <https://doi.org/10.1038/s41559-017-0139>