



# Pet Analysis

## Love Your Pet

Group 15

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# Motivation



Pets are great companions for humans, and make our lives colorful.

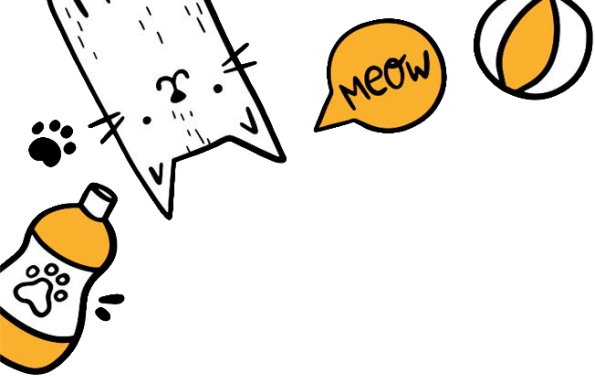


To create a better living environment for pets is one of goals in our group. And we are grateful for the opportunity to use scientific methods and data analysis to make their lives better.



We analyzed the data from Petfinder to provide support and guidance for pet adoption to make sure pets and their people have long, happy lives together.





# Dataset

**01.**

**Where is the data from?**

Petfinder API

**02.**

**What's inside the dataset?**

animals  
breeds  
characteristics  
shelters info

**03.**

**How many?**

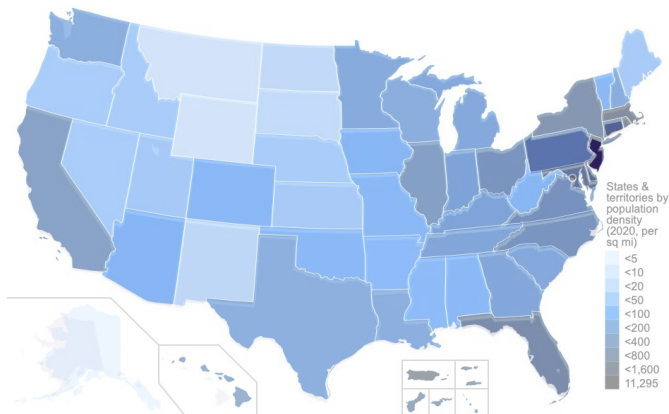
Dog: 150k  
Cat: 79k  
Total: 248k



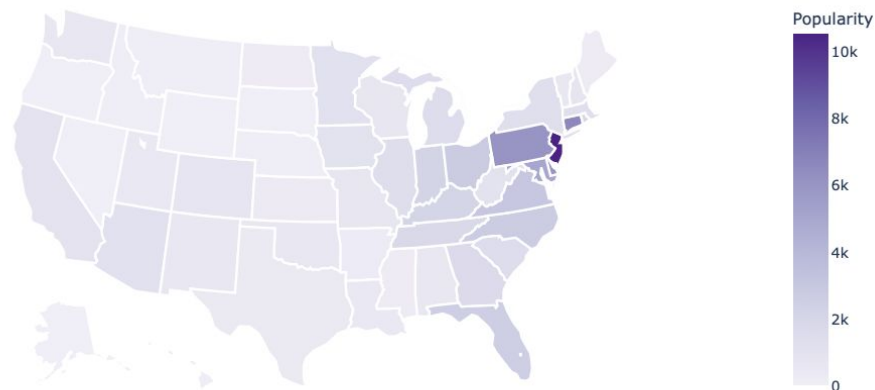
# Cat distribution

Cat distribution related with population density

Population Density<sup>[1]</sup>

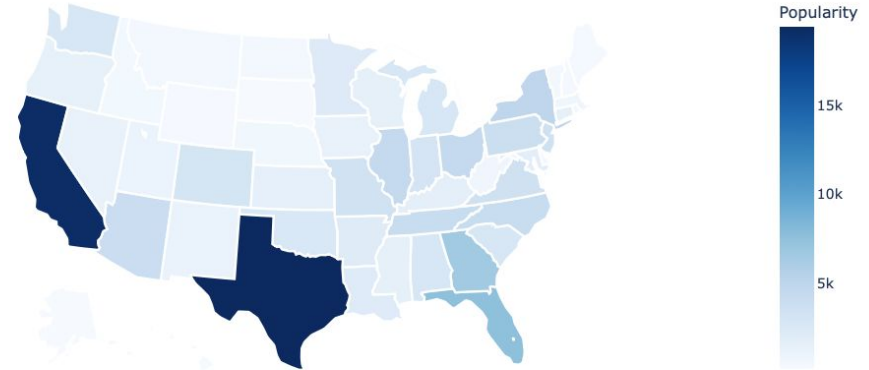
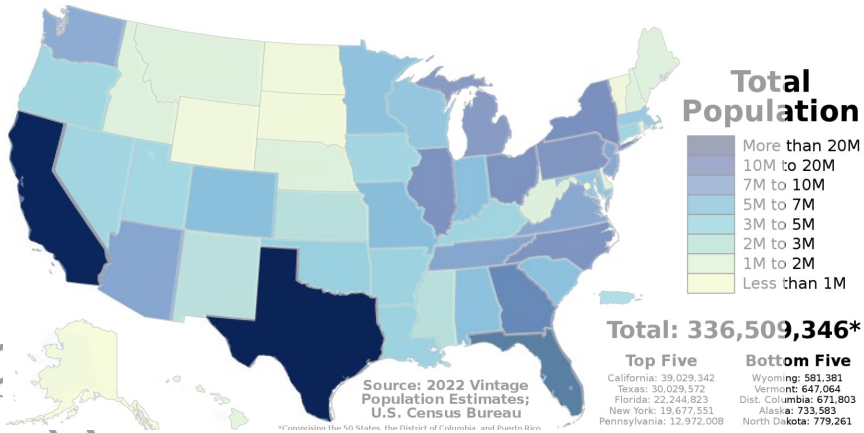


Cat population distribution



# Dog distribution

Dog distribution related with total population




Total Population<sup>[2]</sup>

Dog Population Distribution



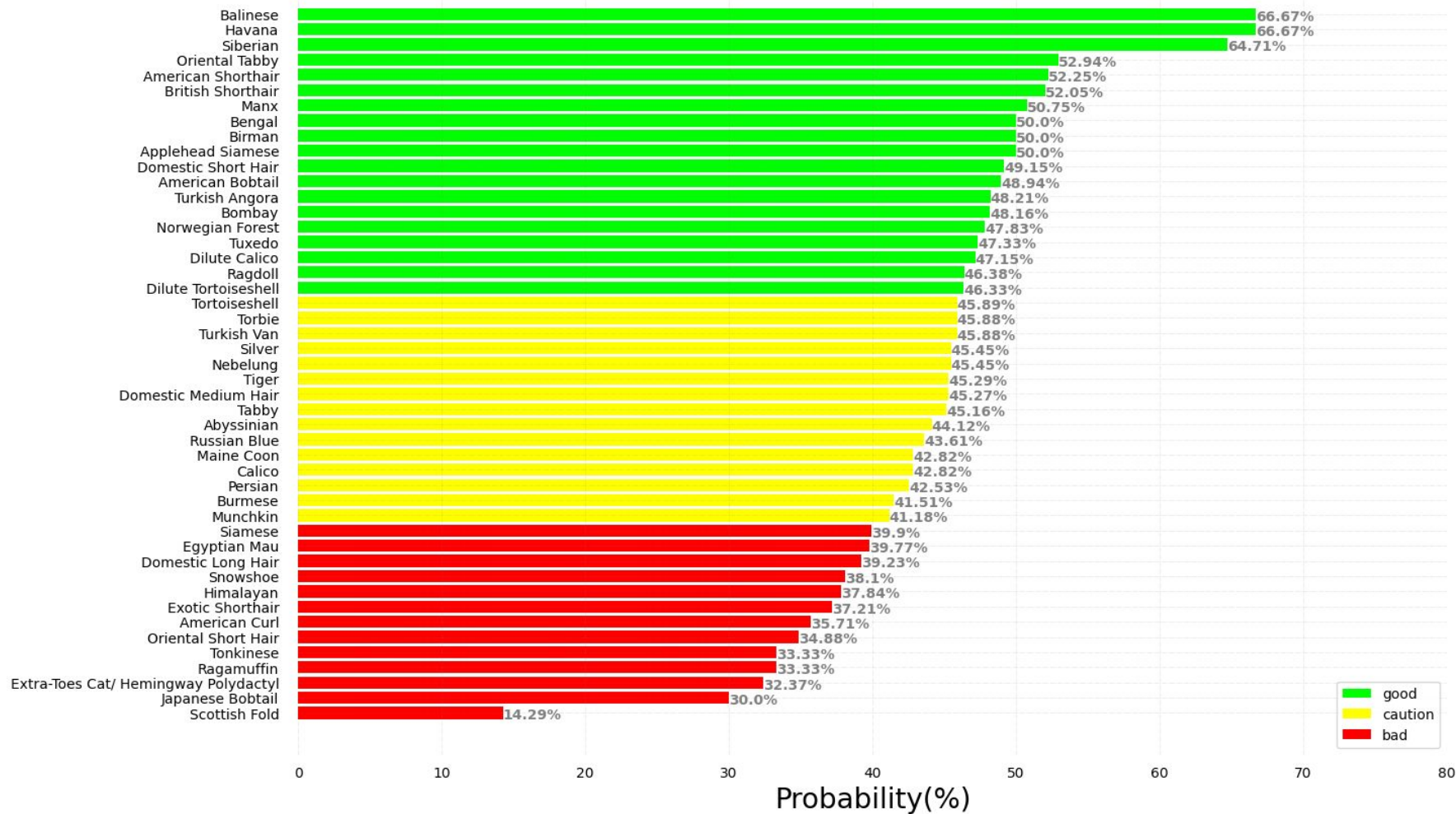
# **Pet and environment**

We recorded the number of pets living in environments with children/another pets, and concluded the probability that a certain breed is accustomed to some certain living environment.



# Cat Breeds VS Probability of Its Living Environment has Children

Cat Breeds

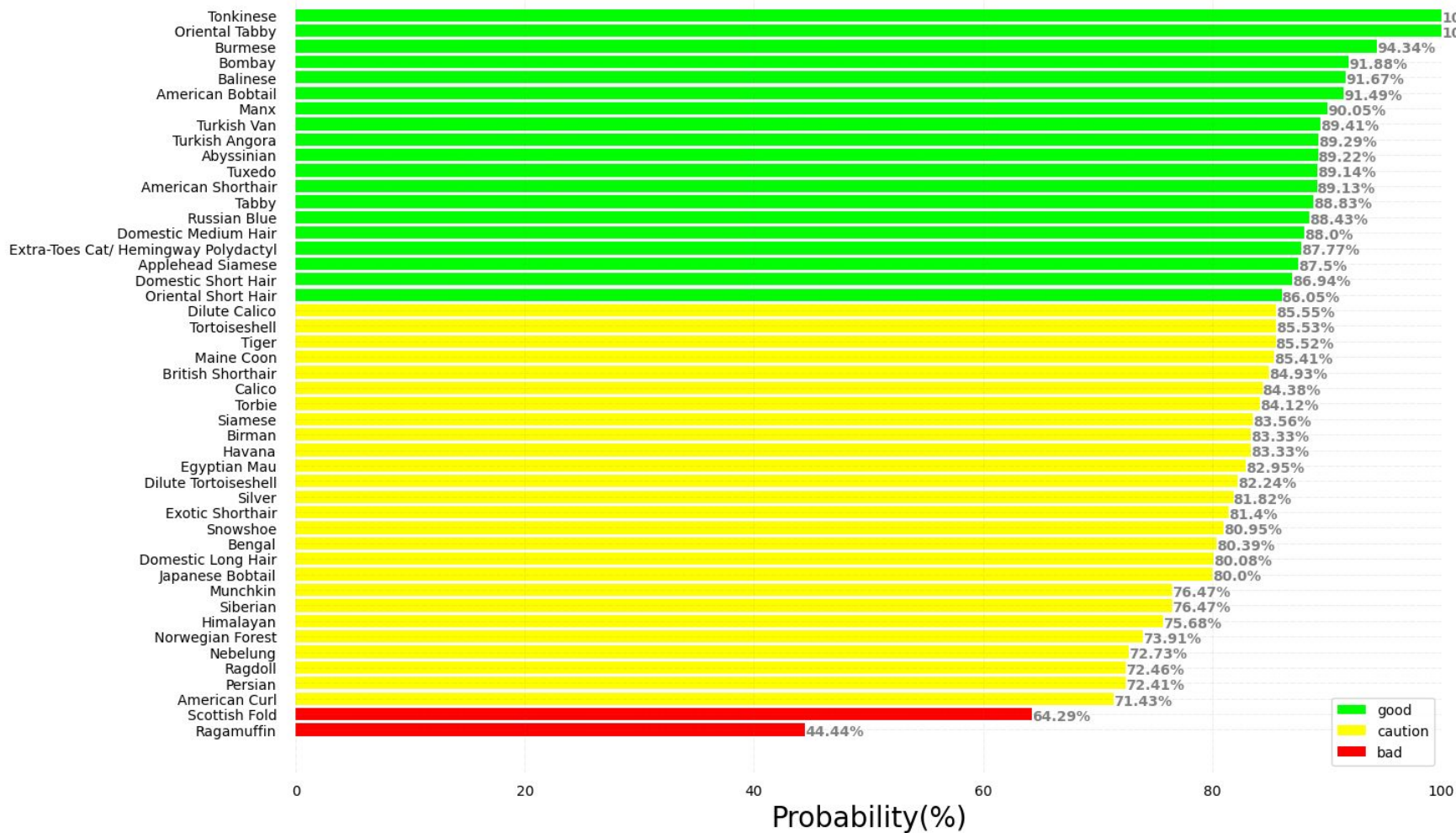


good  
caution  
bad



# Cat Breeds VS Probability of Its Living Environment has another Cats

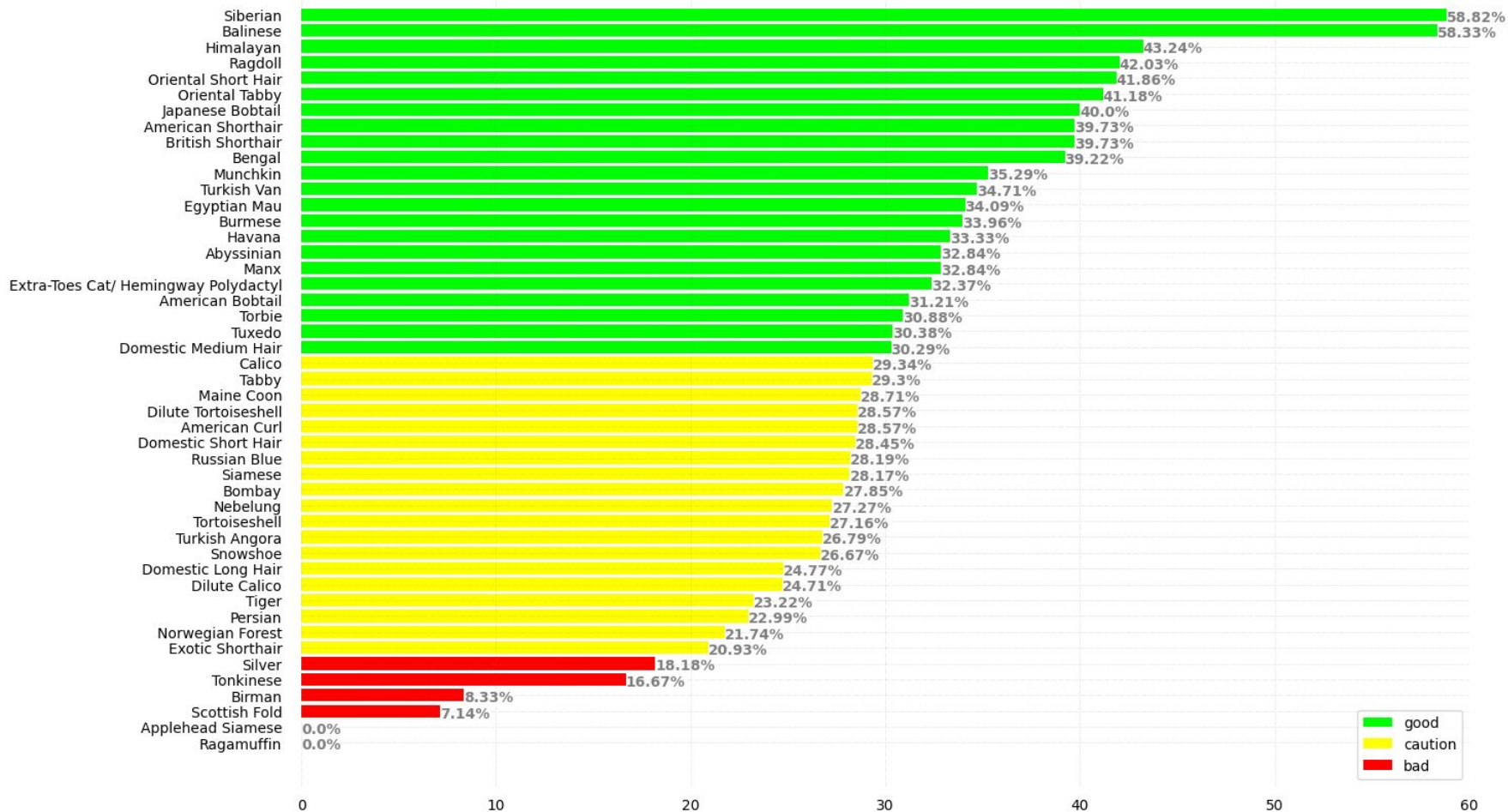
Cat Breeds



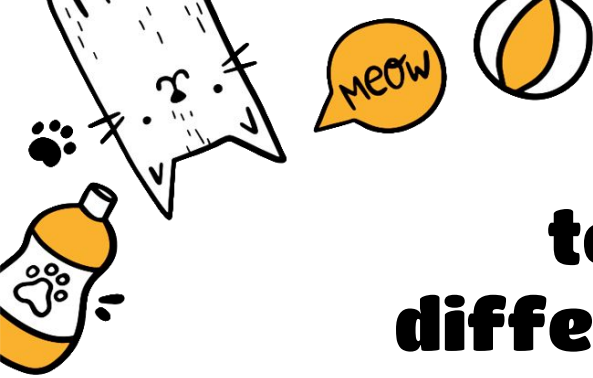


# Cat Breeds VS Probability of Its Living Environment has Dogs

Cat Breeds



Probability(%)



# top 5 Cat Breeds with different living environment

**01.**

**has children**

['Balinese',  
'American Shorthair',  
'Havana',  
'Siberian',  
'Oriental Tabby']



**02.**

**has dogs**

['Siberian',  
'Balinese',  
'Himalayan',  
'Ragdoll',  
'Oriental Shorthair']



**03.**

**has cats**

['Tonkinese',  
'Oriental Tabby',  
'Burmese',  
'Bombay',  
'Balinese']





**A family who has children and keeps a dog, wants to adopt a cat. Base on our analysis, we will recommend ...**



### **top 5 cat breeds recommend**

- American Bobtail
- American Shorthair
- Balinese
- Manx
- Oriental Tabby



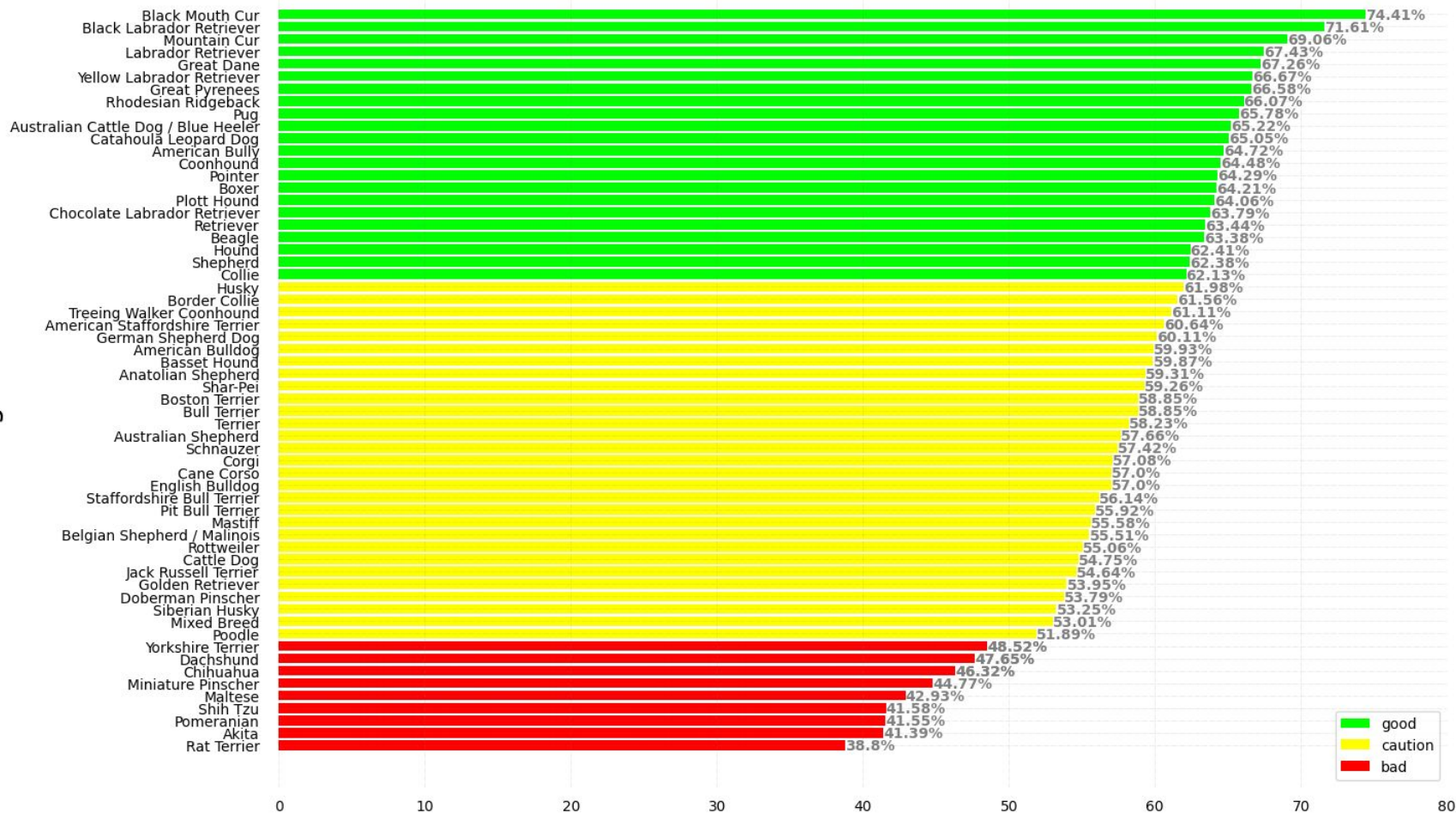
### **some cat breeds might need to avoid**

- Applehead Siamese
- Ragamuffin
- Scottish Fold



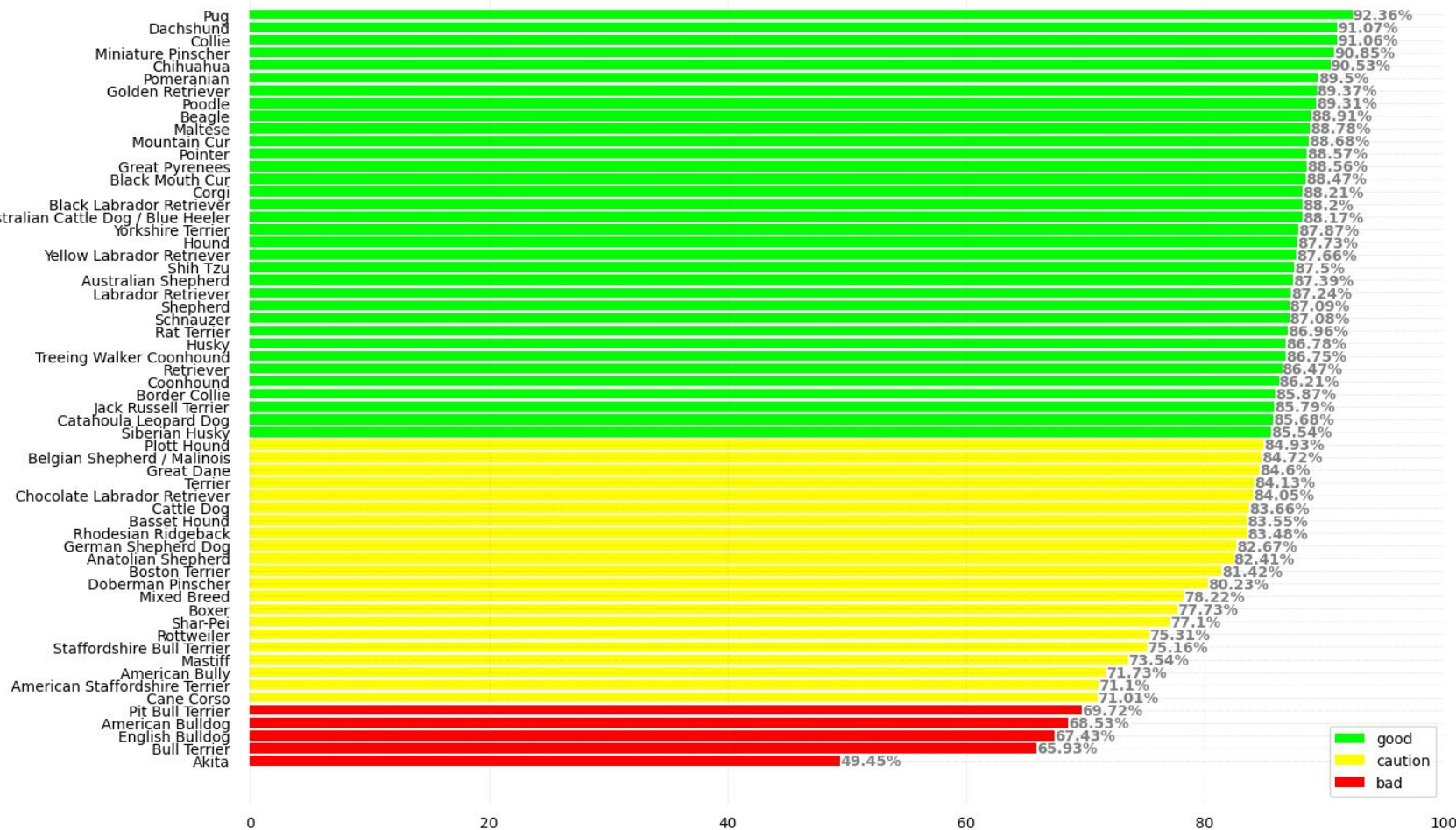
# Dog Breed VS Probability of Its Living Environment has Children

Dog Breeds



# Dog Breed VS Probability of Its Living Environment has Another Dogs

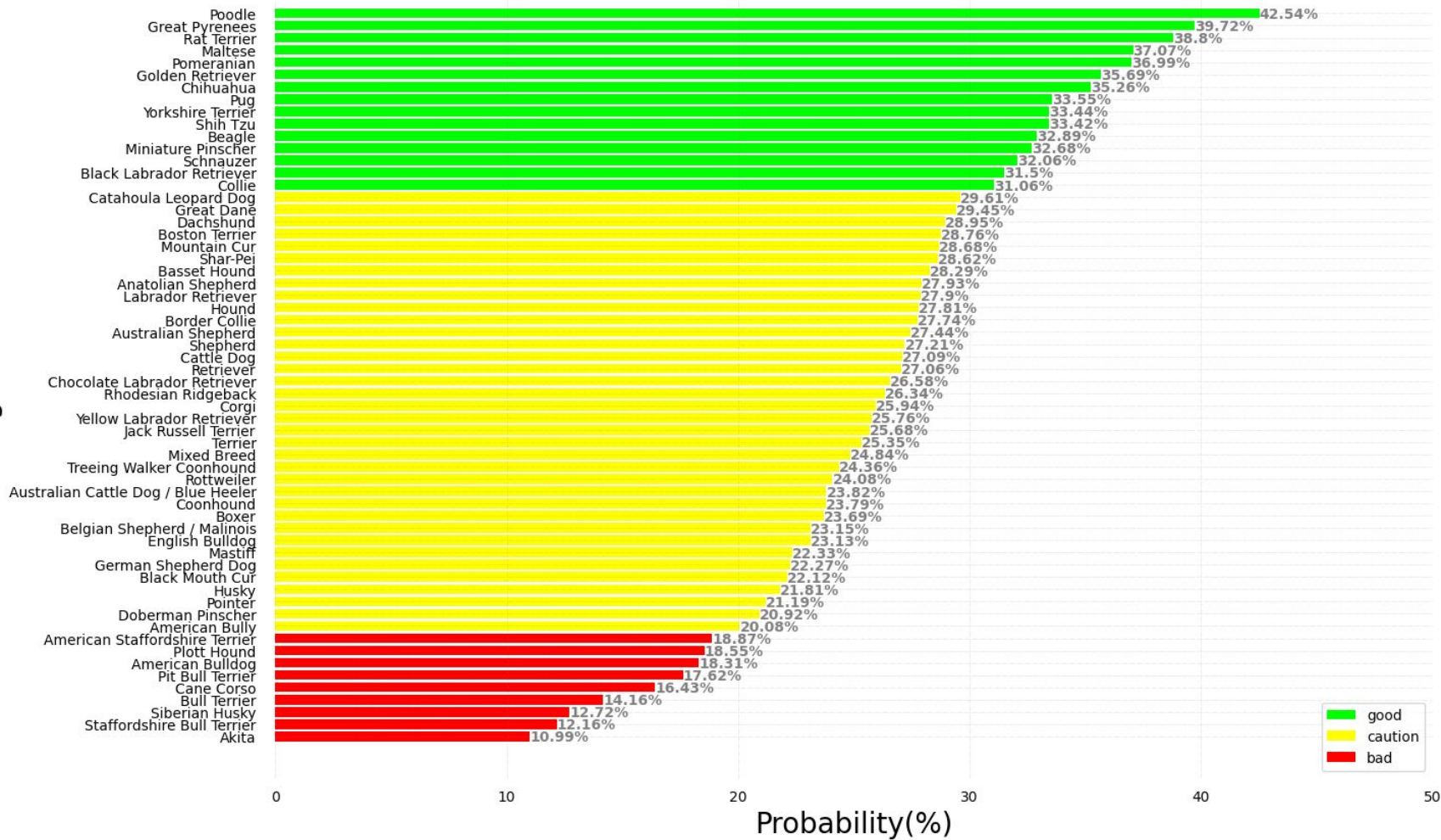
Dog Breeds

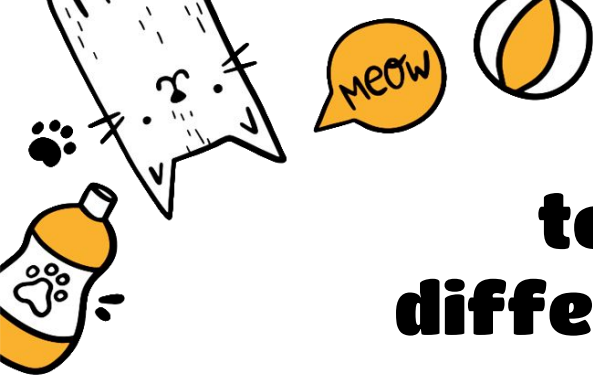




# Dog Breed VS Probability of Its Living Environment has Cats

Dog Breeds





# top 5 Dog Breeds with different living environment

**01.**

**has children**

['Black Mouth Cur',  
'Black Labrador Retriever',  
'Mountain Cur',  
'Labrador Retriever',  
'Great Dane']



**02.**

**has dogs**

['Pug',  
'Dachshund',  
'Collie',  
'Miniature Pinscher',  
'Chihuahua']



**03.**

**has cats**

['Poodle',  
'Great Pyrenees',  
'Maltese',  
'Pomeranian',  
'Golden Retriever']







**A family who has children and keeps a cat, wants to adopt a dog. Base on our analysis, we will recommend ...**



### **top 5 dog breeds recommend**

- Beagle
- Black Labrador Retriever
- Great Pyrenees
- Mountain Cur
- Pug



### **some dog breeds might need to avoid**

- Akita
- Mastiff
- Pit Bull Terrier





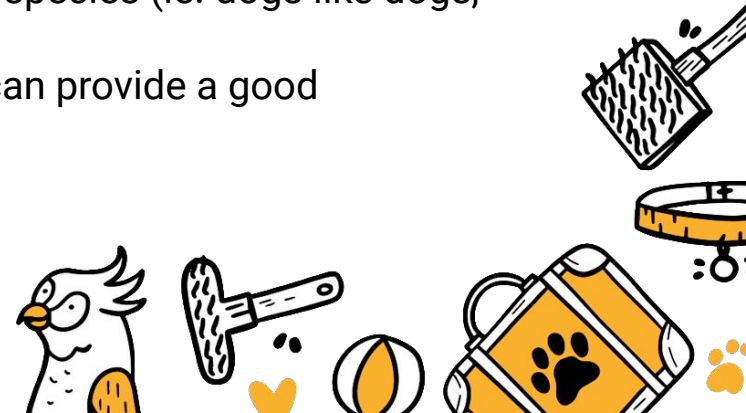
# Conclusion

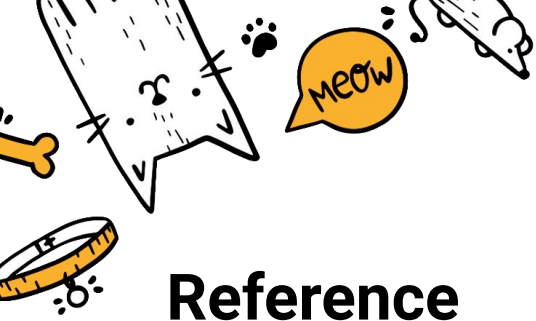
## Population Distribution:

- Population distribution of dog is related to human population.
- Population distribution of cat is related to the owner's house area.

## Living Environment:

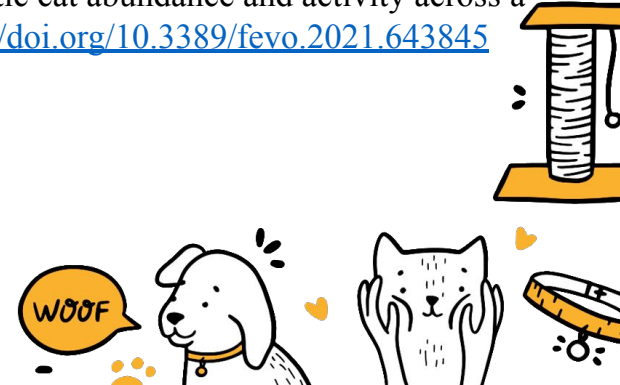
- Pets are more likely to live with their own species (ie. dogs like dogs, cats like cat).
- Consider carefully when adopting if you can provide a good environment for your upcoming pet.





# Reference

- [1] List of states and territories of the United States by population density. (2023, February 20). In Wikipedia. [https://en.wikipedia.org/wiki/List\\_of\\_states\\_and\\_territories\\_of\\_the\\_United\\_States\\_by\\_population\\_density](https://en.wikipedia.org/wiki/List_of_states_and_territories_of_the_United_States_by_population_density)
- [2] List of U.S. states and territories by population. (2023, March 9). In Wikipedia. [https://en.wikipedia.org/wiki/List\\_of\\_U.S.\\_states\\_and\\_territories\\_by\\_population](https://en.wikipedia.org/wiki/List_of_U.S._states_and_territories_by_population)
- [3] Bennett, K. F., Evans, B. S., Clark, J. A., & Marra, P. P. (2021). Domestic cat abundance and activity across a residential land use gradient. *Frontiers in Ecology and Evolution*, 9. <https://doi.org/10.3389/fevo.2021.643845>
- [4] Dailypaws. [Cat and dog pictures]. <https://www.dailypaws.com/>





**Thanks !**