PetFinder.my
Helping Rehome Our Pets

Grace Valmadrid

January 2020

370,000 cats

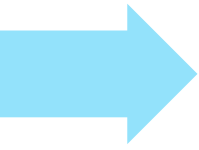A female **cat** and its offsprings can produce over 7 years

67,000 dogs

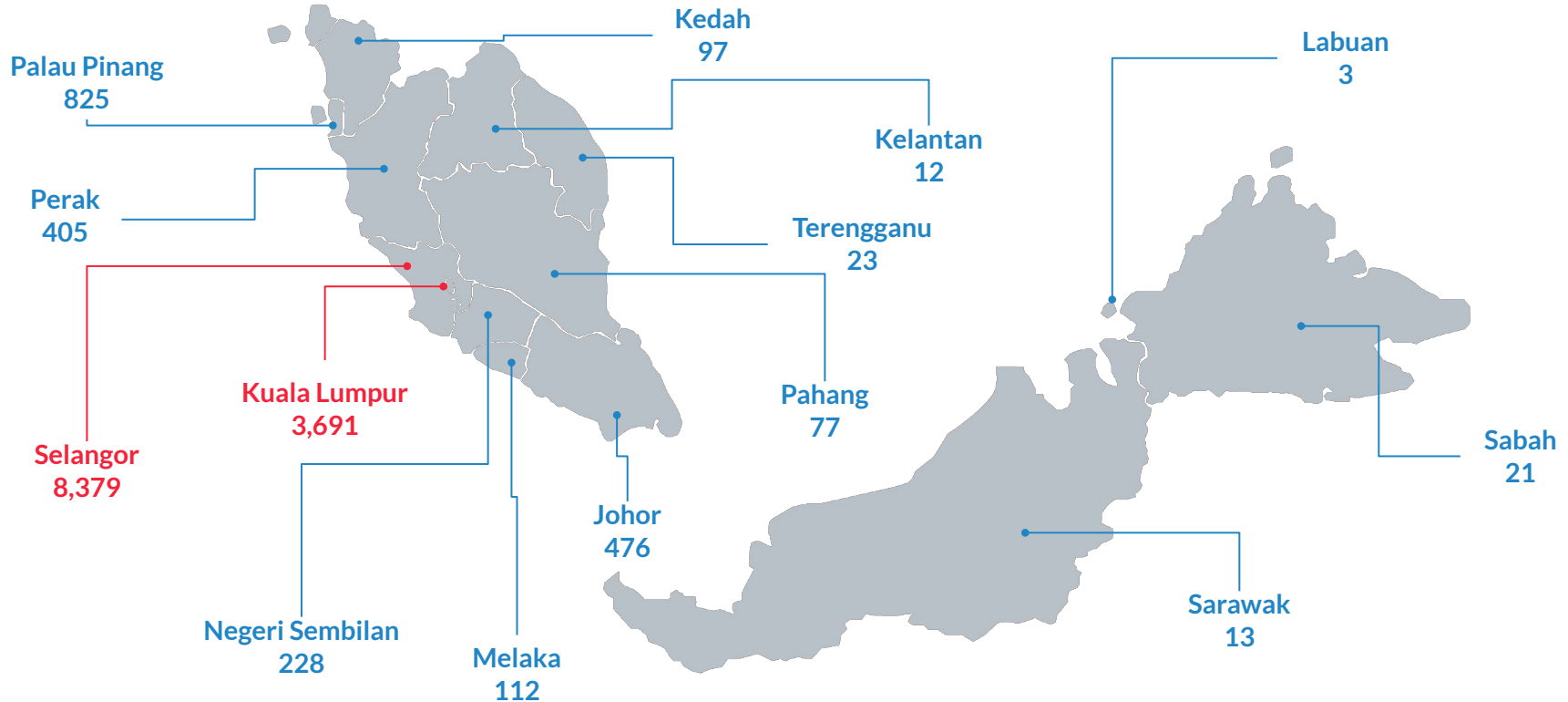A female **dog** and its offsprings can produce over 6 years

How can we help shelters, rescuers and owners rehome their pets faster?
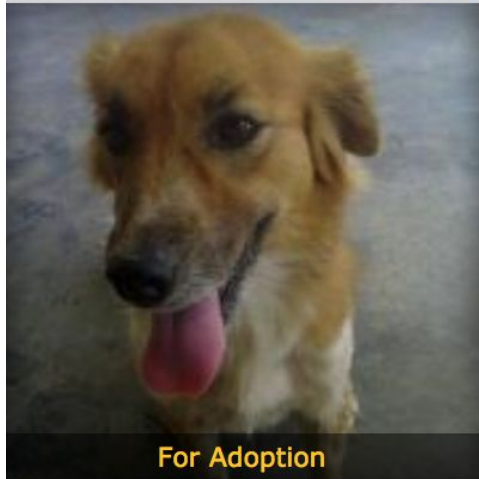
14,372 pet listings across Malaysia

Kedah
97

Labuan
3

Palau Pinang
825

Kelantan
12

Perak
405

Terengganu
23

Kuala Lumpur
3,691

Pahang
77

Selangor
8,379

Sabah
21

Johor
476

Negeri Sembilan
228

Sarawak
13

Melaka
112

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Pet information

Happy-FIFI

« Back To Listing

Dog	Mixed Breed
Profile	Male, 29 Years 3 Months
Vaccinated	Not Sure
Dewormed	Not Sure
Neutered	Not Sure
Condition	Healthy
Body	Medium Size, Medium Fur
Color	Brown, White
Location	Ipoh, Perak
Posted	9 Feb 2012
Adoption Fee	FREE

For Adoption

Google Cloud Natural Language API

	Score	Magnitude
Entire Document	0.6	1.8
very suitable to be a guard.	0.1	0.1
easy handle. :)	0.8	0.8
cute and fierce to strangers	0.7	0.7

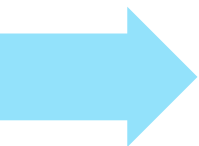| Score Range	0.25 — 1.0	-0.25 — 0.25	-1.0 — -0.25

This pet has been listed for over 90 days and may already have been adopted. Kindly **notify us** if it is no longer available, to help us maintain an accurate database of pets.

very suitable to be a guard.
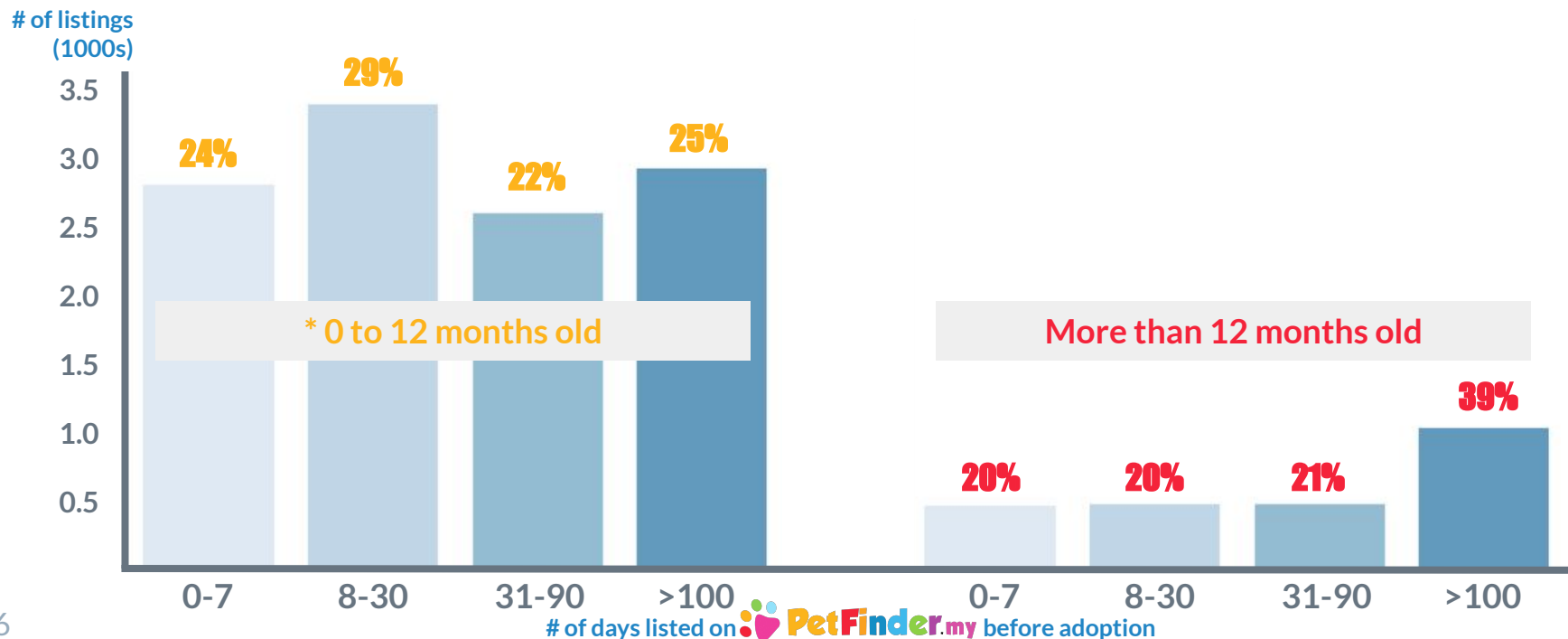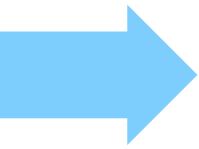easy handle. :)
cute and fierce to strangers

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Do younger* pets get adopted faster?

# of listings (1000s)

* 0 to 12 months old

More than 12 months old

24% — 0-7
29% — 8-30
22% — 31-90
25% — >100

20% — 0-7
20% — 8-30
21% — 31-90
39% — >100

# of days listed on PetFinder.my before adoption

6

Do pure and mixed breeds get adopted faster?

Breeds

Mixed

Domestic

Pure

0-7   8-30   31-90   >100

# of days listed on
PetFinder.my
before adoption
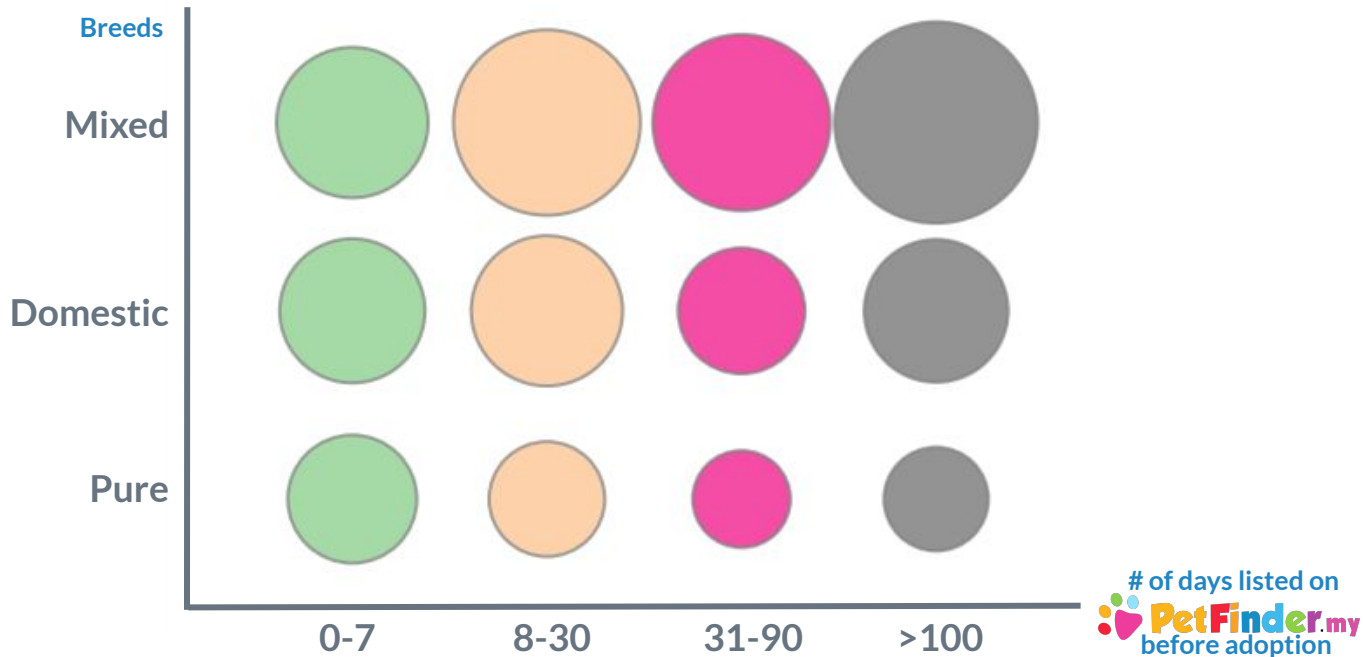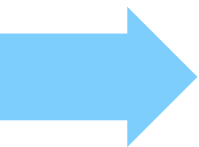
Do smaller* breeds get adopted faster?

# of listings (1000s)

3.5 — 23%
3.0
2.5
2.0
1.5
1.0
0.5

0-7: 23%
8-30: 27%
31-90: 22%
>100: 28%

* size at maturity: small and medium

# of days listed on PetFinder.my before adoption

8
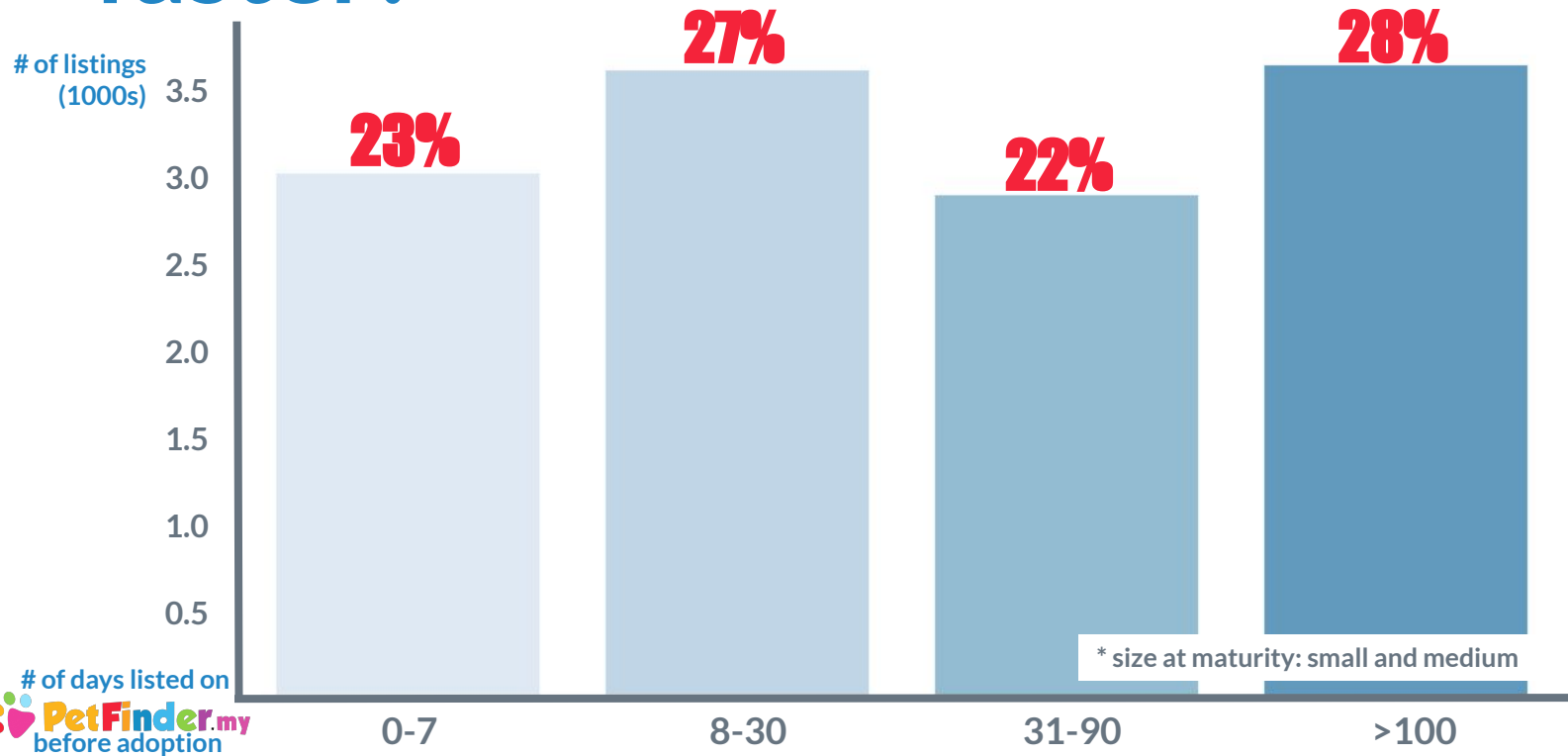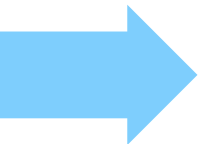
Does a **well-written** description help?

Overall sentiment score (y-axis) vs. # of days listed on PetFinder.my before adoption (x-axis: 0-7, 8-30, 31-90, >100)
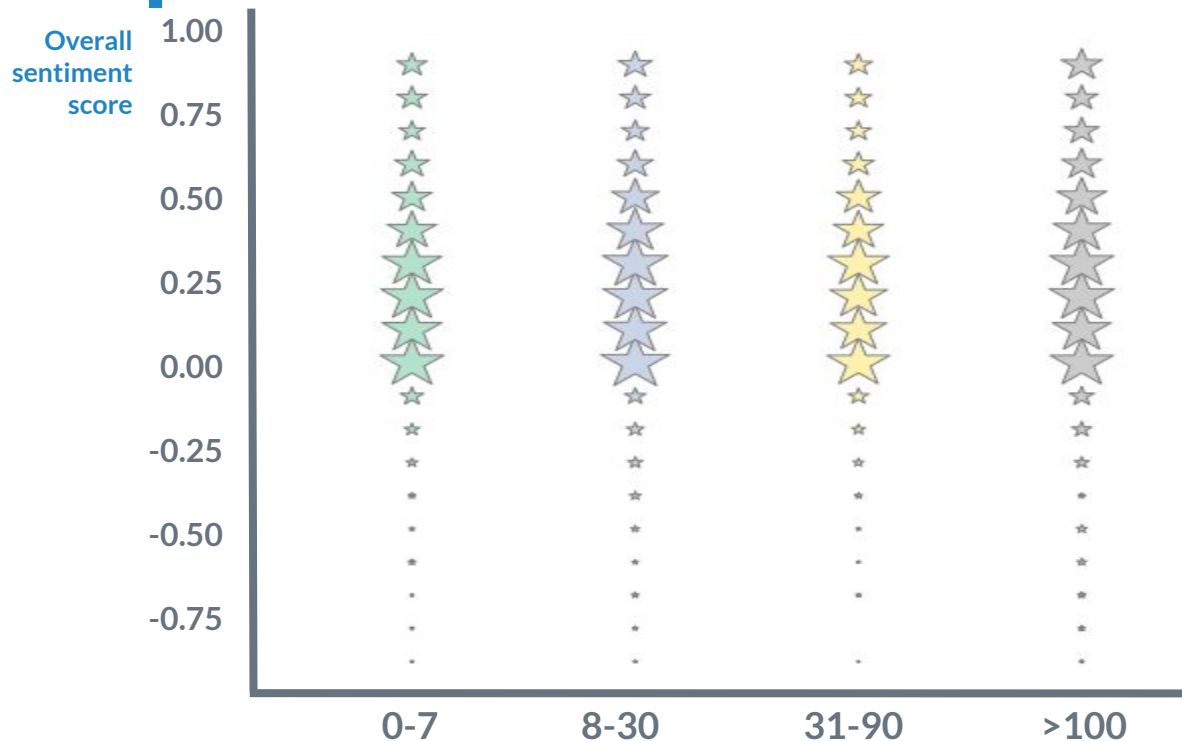
Classifier Model

Accuracy score: **0.42**

Cohen's kappa score: **0.36**

Dataset lacks the needed information!

Confusion Matrix

| Actual \ Prediction	0-7	8-30	31-90	>100
0-7	41	30	6	23
8-30	24	36	15	26
31-90	16	32	19	33
>100	11	16	7	66

# of days listed on Petfinder.my before adoption

Figures in the above matrix are all in %

So what does the model say?

▷ There is very low chance that pets in **Kuala Lumpur** will be rehomed within 3 months.

▷ Surrounding state, **Selangor**, has a higher success rate of pets getting adopted faster.

▷ Smaller breeds are preferred.
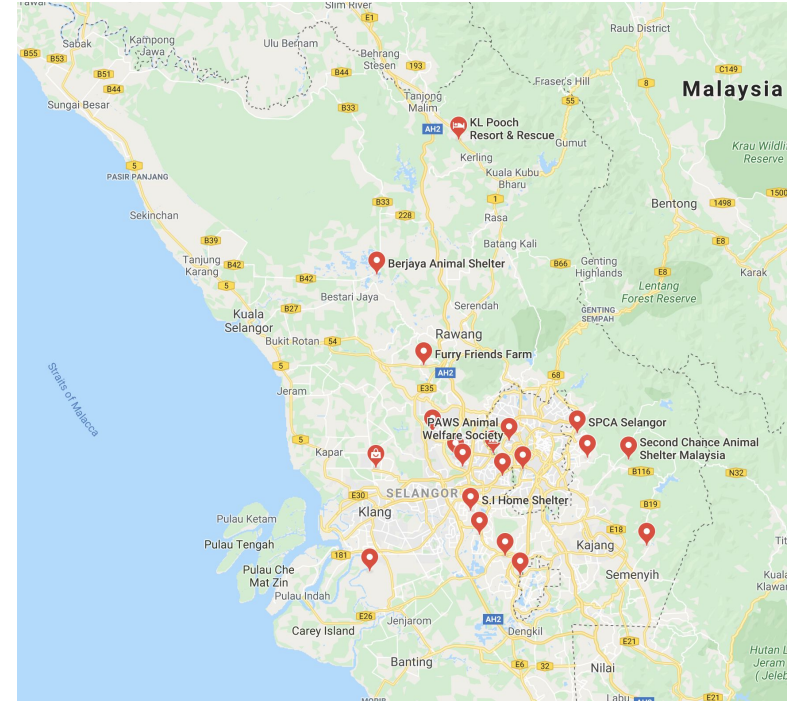
Courtesy of Google Maps

Recommended Enhancements

Offer users similar pet listings

Add a recommender system based on images

Current Layout

https://www.petfinder.my/pets/76753/

Use image classification to verify breed

Build a model that verifies the breed based on the photo/s uploaded. It will compare the result with the breed/s selected then prompt the user.

Upload Pet Pictures: We strongly recommend uploading at least 1 photo of the pet. Attractive photos will provide a good impression and generate more interested enquiries. More photos and videos can be uploaded once the pet profile is created.

Photo #1: [Choose file] No file chosen
Caption #1: [   ]

Photo #2: [Choose file] No file chosen
Caption #2: [   ]

Photo #3: [Choose file] No file chosen
Caption #3: [   ]

Photo #4: [Choose file] No file chosen
Caption #4: [   ]

Photo #5: [Choose file] No file chosen
Caption #5: [   ]

Have <u>videos</u> of your pet in action? You can upload them after creating this profile.

[Create Pet Profile]

Update the search window

Aggregate KUALA LUMPUR and SELANGOR; or

Convert LOCATION into tick boxes

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Revamp the listing form

▷ Remove mixed option for breed

▷ Ask if the age is unknown; remove auto-aging option

▷ Split color section into 2: dominant and other colors

▷ Size at maturity should be based on breed

▷ Require reason for relinquishment

Thank you for listening!

Appendix

Dataset

Adoption Speed - Categorical speed of adoption:
- **1** - Pet was adopted between 0 and 7 days after being listed.
- **2** - Between 8 and 30 days.
- **3** - Between 31 and 90 days.
- **4** - No adoption after 100 days.

adoption_speed	1	2	3	4	total
breed1_desc					
mixed_breed	932	1566	1366	1999	5863
domestic_short_hair	825	973	696	883	3377
domestic_medium_hair	328	308	210	276	1122
tabby	89	92	63	90	334
domestic_long_hair	95	61	52	45	253
siamese	100	64	40	42	246
labrador_retriever	51	59	61	34	205
persian	87	48	36	28	199
shih_tzu	75	53	34	27	189
poodle	66	46	29	25	166
terrier	31	46	50	32	159
golden_retriever	53	42	33	21	149
calico	25	17	19	38	99
german_shepherd_dog	25	35	22	16	98
beagle	32	15	28	14	89
rottweiler	32	22	22	12	88
spitz	14	24	28	22	88
american_shorthair	23	18	12	34	87
oriental_short_hair	17	14	9	32	72
schnauzer	27	13	16	13	69

adoption_speed	1	2	3	4	total
breed2_desc					
mixed_breed	312	429	470	500	1711
domestic_short_hair	145	161	106	121	533
domestic_medium_hair	100	79	49	62	290
tabby	35	48	24	28	135
domestic_long_hair	35	27	28	29	119
siamese	31	22	21	21	95
terrier	26	17	28	19	90
labrador_retriever	21	22	24	19	86
persian	28	23	10	10	71
german_shepherd_dog	15	22	8	10	55
spitz	5	17	12	13	47
golden_retriever	11	7	11	10	39
rottweiler	19	14	5	1	39
calico	7	10	13	8	38
poodle	17	10	7	4	38
bengal	13	8	7	8	36
shih_tzu	11	10	4	7	32
american_shorthair	10	5	5	9	29
tortoiseshell	6	10	5	3	24
doberman_pinscher	1	6	8	7	22

adoption_speed	1	2	3	4	total
color1_desc					
black	1581	1965	1561	1967	7074
brown	773	939	828	1096	3636
golden	227	270	178	227	902
cream	244	230	182	200	856
gray	177	190	125	161	653
white	183	179	124	163	649
yellow	148	133	141	180	602

adoption_speed	1	2	3	4	total
color2_desc					
white	811	880	753	838	3282
brown	651	923	737	885	3196
cream	264	309	227	281	1081
gray	285	267	197	243	992
yellow	164	227	164	256	811
golden	169	171	146	193	679

adoption_speed	1	2	3	4	total
color3_desc					
white	708	852	643	835	3038
cream	112	91	93	112	408
gray	87	111	66	88	352
yellow	29	43	37	70	179
golden	40	40	32	54	166

Dataset

Dewormed: 1 = Yes, 0 = No or Not Sure
Sterilized (Neutered/Spayed): 1 = Yes, 0 = No or Not Sure
Health: 1 = Healthy, 2 = Minor Injury, 3 = Serious Injury
Size at Maturity: 1 = Small, 2 = Medium, 3 = Large, 4 = Extra Large
Fur Length: 1 = Short, 2 = Medium, 3 = Long
Vaccinated: 1 = Yes, 0 = No or Not Sure

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adoption_speed	1	2	3	4	total
dewormed					
1	1696	2211	1947	2298	8152
0	1637	1695	1192	1696	6220

adoption_speed	1	2	3	4	total
sterilized					
0	2913	3264	2429	2723	11329
1	420	642	710	1271	3043

adoption_speed	1	2	3	4	total
health					
1	3233	3796	3035	3821	13885
2	97	104	94	162	457
3	3	6	10	11	30

adoption_speed	1	2	3	4	total
maturity_size					
2	2072	2764	2297	2852	9985
1	943	847	598	792	3180
3	309	284	234	347	1174
4	9	11	10	3	33

adoption_speed	1	2	3	4	total
fur_length					
1	1779	2310	1923	2494	8506
2	1272	1388	1066	1369	5095
3	282	208	150	131	771

adoption_speed	1	2	3	4	total
vaccinated					
0	2251	2457	1741	2134	8583
1	1082	1449	1398	1860	5789

Credits

- ▷ Dataset from Kaggle
- ▷ Images by Petfinder.my and Unsplash
- ▷ Presentation template by SlidesCarnival