

## Animals with attributes 2 (AWA2) dataset description

### General information:

This dataset provides a platform to benchmark transfer-learning algorithms, in particular attribute base classification and zero-shot learning. It can act as a drop-in replacement to the original Animals with Attributes (AwA) dataset, as it has the same class structure and same characteristics.

### About dataset:

Animals with attributes 2 (AWA2) dataset contains of 37322 images of 50 animals classes with pre-extracted feature representations for each image. The classes are aligned with Osherson's classical class/attribute matrix, thereby providing 85 numeric attribute values for each class. Split the images in each category into 60% for training and 40% for testing. The image data was collected from public sources, such as Flickr, in 2016. In the process we made sure to only include images that are licensed for free use and redistribution.

### The dataset page:

- <https://cvml.ist.ac.at/AwA2/>

### Download link:

- <https://cvml.ist.ac.at/AwA2/AwA2-features.zip> - TXT format
- <https://cvml.ist.ac.at/AwA2/AwA2-data.zip> - JPG format

### Animal classes in dataset:

1	antelope
2	grizzly+bear
3	killer+whale
4	beaver
5	dalmatian
6	persian+cat
7	horse
8	german+shepherd
9	blue+whale
10	siamese+cat
11	skunk
12	mole
13	tiger
14	hippopotamus
15	leopard
16	moose
17	spider+monkey
18	humpback+whale
19	elephant
20	gorilla
21	ox
22	fox
23	sheep
24	seal
25	chimpanzee

26	hamster
27	squirrel
28	rhinoceros
29	rabbit
30	bat
31	giraffe
32	wolf
33	chihuahua
34	rat
35	weasel
36	otter
37	buffalo
38	zebra
39	giant+panda
40	deer
41	bobcat
42	pig
43	lion
44	mouse
45	polar+bear
46	collie
47	walrus
48	raccoon
49	cow
50	dolphin

### Structure of the dataset:

The main folder:

- att\_splits.mat/
- res101.mat/

File res101.mat contains:

- features/
- filename/
- labels/

The «features» file contains attachments. The “filename” (image\_file) file contains the path to the image files. Image names in dataset: antelope\_10001.jpg, antelope\_10002.jpg, antelope\_10003.jpg... The «labels» file contains a layer. The «att\_splits» file contains animal predicates in the form of a matrix [85x50]. Their presence or absence is designated 0 or 1.

### Attribute values for each class:

1	black
2	white
3	blue
4	brown
5	gray
6	orange
7	red
8	yellow
9	patches
10	spots
11	stripes
12	furry
13	hairless
14	toughskin
15	big
16	small
17	bulbous
18	lean
19	flippers
20	hands
21	hooves
22	pads
23	paws
24	longleg
25	longneck
26	tail
27	chewteeth
28	meatteeth
29	buckteeth
30	strainteeth

31	horns
32	claws
33	tusks
34	smelly
35	flies
36	hops
37	swims
38	tunnels
39	walks
40	fast
41	slow
42	strong
43	weak
44	muscle
45	bipedal
46	quadrupedal
47	active
48	inactive
49	nocturnal
50	hibernate
51	agility
52	fish
53	meat
54	plankton
55	vegetation
56	insects
57	forager
58	grazer
59	hunter
60	scavenger

61	skimmer
62	stalker
63	newworld
64	oldworld
65	arctic
66	coastal
67	desert
68	bush
69	plains
70	forest
71	fields
72	jungle
73	mountains

74	ocean
75	ground
76	water
77	tree
78	cave
79	fierce
80	timid
81	smart
82	group
83	solitary
84	nestspot
85	domestic

Matrix predicate:

