

## 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. 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/

### 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:

