Dataset Name:

[Caltech-UCSD Birds-200-2011 (CUB-200-2011)](#)

Dataset Description:

[Caltech-UCSD Birds-200-2011](#) (CUB-200-2011) is an extended version of the [CUB-200 dataset](#), with roughly double the number of images per class and new part location annotations.

Number of categories: 200
Number of images: 11,788
Annotations per image: 15 Part Locations, 312 Binary Attributes, 1 Bounding Box

1. **IMAGES AND CLASS LABELS:**

Images are contained in the directory images/, with 200 subdirectories (one for each bird species)

a. **List of image files (images.txt)**

The list of image file names is contained in the file images.txt, with each line corresponding to one image: <image_id> <image_name>

b. Train/test split (train_test_split.txt)

The suggested train/test split is contained in the file train_test_split.txt, with each line corresponding to one image: <image_id> <is_training_image>

where <image_id> corresponds to the ID in images.txt, and a value of 1 or 0 for <is_training_image> denotes that the file is in the training or test set, respectively.

c. List of class names (classes.txt)

The list of class names (bird species) is contained in the file classes.txt, with each line corresponding to one class: <class_id> <class_name>

d. Image class labels (image_class_labels.txt)

The ground truth class labels (bird species labels) for each image are contained in the file image_class_labels.txt, with each line corresponding to one image: <image_id><class_id>

where <image_id> and <class_id> correspond to the IDs in images.txt and classes.txt, respectively.

2. BOUNDING BOXES:

Each image contains a single bounding box label. Bounding box labels are contained in the file bounding_boxes.txt, with each line corresponding to one image:<image_id> <x> <y> <width> <height>

where <image_id> corresponds to the ID in images.txt, and <x>, <y>, <width>, and <height> are all measured in pixels

3. PART LOCATIONS:

a. List of part names (parts/parts.txt)

The list of all part names is contained in the file parts/parts.txt, with each line corresponding to one part: <part_id> <part_name>

b. Part locations (parts/part_locs.txt) ------

The set of all ground truth part locations is contained in the file parts/part_locs.txt, with each line corresponding to the annotation of a particular part in a particular image: <image_id> <part_id> <x> <y> <visible>

where <image_id> and <part_id> correspond to the IDs in images.txt and parts/parts.txt, respectively. <x> and <y> denote the pixel location of the center of the part. <visible> is 0 if the part is not visible in the image and 1 otherwise.

4. ATTRIBUTE LABELS:

a. List of attribute names (attributes/attributes.txt)

The list of all attribute names is contained in the file attributes/attributes.txt, with each line corresponding to one attribute:<attribute_id> <attribute_name>

b. List of certainty names (attributes/certainties.txt)

The list of all certainty names (used by workers to specify their certainty of an attribute response of is contained in the file attributes/certainties.txt, with each line corresponding to one certainty: <certainty_id> <certainty_name>

c. Class attribute labels (attributes/class_attribute_labels_continuous.txt)

Attributes on a per-class level--in a similar format to the Animals With Attributes dataset--are contained in attributes/class_attribute_labels_continuous.txt. The file contains 200 lines and 312 space-separated columns. Each line corresponds to one class (in the same order as classes.txt) and each column contains one real-valued number corresponding to one attribute (in the same order as attributes.txt). The number is the percentage of the time (between 0 and 100) that a human thinks that the attribute is present for a given class.

References:

Wah C., Branson S., Welinder P., Perona P., Belongie S. "The Caltech-UCSD Birds-200-2011 Dataset." Computation & Neural Systems Technical Report, CNS-TR-2011-001. **download pdf**