# http://www.vision.caltech.edu/visipedia/collage.jpg

# Dataset Name:

[**Caltech-UCSD Birds-200-2011 (CUB-200-2011)**](http://www.vision.caltech.edu/visipedia/CUB-200-2011.html)

# Dataset Description:

**[Caltech-UCSD Birds-200-2011](http://www.vision.caltech.edu/visipedia/CUB-200-2011.html)** (CUB-200-2011) is an extended version of the [CUB-200 dataset](http://www.vision.caltech.edu/visipedia/CUB-200.html), 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

## IMAGES AND CLASS LABELS:

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

### 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>

### 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.

### 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>

### 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.

## 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

## PART LOCATIONS:

### 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>

### 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.

## ATTRIBUTE LABELS:

### 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>

### 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>

### 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**](http://www.vision.caltech.edu/visipedia/papers/CUB_200_2011.pdf)