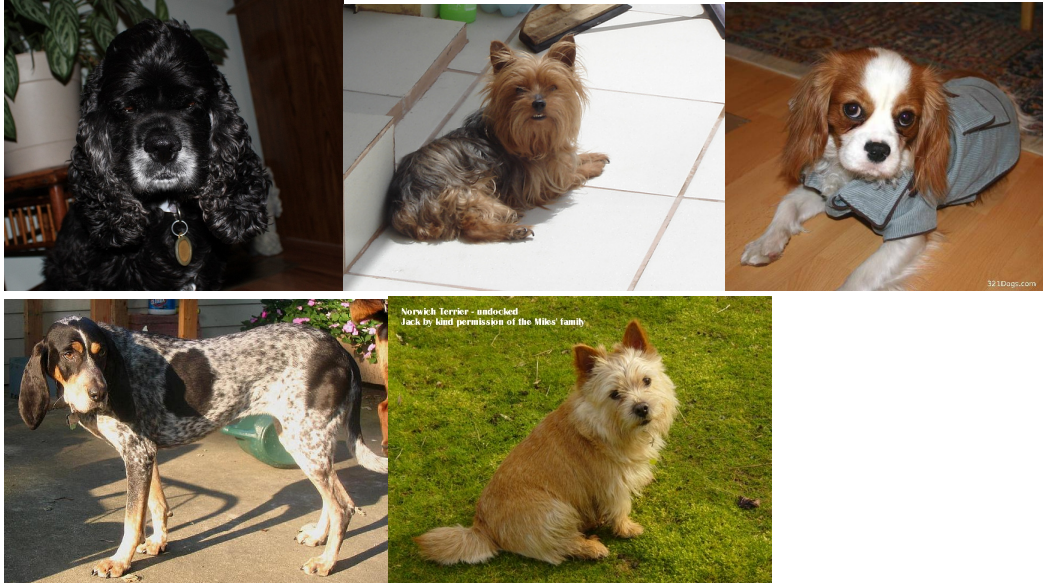


MO444 - 2018s1 - Activity #4

MO444 - 2018s1 - Activity #4 - Prof. Anderson Rocha (anderson.rocha@ic.unicamp.br)

Objective

Predict the **breed** of a dog from images.



Activities

1. Engineer your features. Here you do not have them for free. You need to think of possible ways for transforming the collected data into meaningful features. For some ideas, consider traditional features such as texture features, color features, bags of visual words or more powerful ones involving CNNs. If you cannot think of anything, talk to the professor for some ideas.
2. Propose classification techniques to solve the problem. Suggestions here are the CNN directly, or SVMs/Random Forests allied with CNNs through the use of transfer learning.
3. Consider using data augmentation in the training (what about in the testing as well?)
4. **Observation:** You are free to use any solution to help you extract the features at this point.
5. Report all of your results for the validation and test data. The labels for the test will be released **one week before the deadline**.

Metric

1. The classification metrics to be used in this assignment are **Normalized Accuracy and F1**.

Dataset

Images in the training set were captured with different camera models. There are 83 classes with 100 images for training for each class. In the validation, there is 73 images per class.

In the training and validation, the data files follow the format xx_yyyy.jpg, where xx denotes the class (from 00 to 82) and yyyy is the image id in the class. In the test, the filenames are random.

The datasets are available at:

1. **IC/Unicamp**

- http://www.recod.ic.unicamp.br/~feandalo/MO444_dogs.tar.gz

2. **Dropbox**

- https://www.dropbox.com/s/8hspt835gweirp3/MO444_dogs.tar.gz?dl=0

Deadline

Monday, June 4th in the beginning of the class.

Submission

Bring your 4-page printed report and submit during class on the deadline day. This activity is with PAIRS (teams of two).