

Project #3 Semantic and Attribute Representation

Due March 31, 2014 5:00pm

Description

Now your team has made efforts in building the library for extract low level representation for images. In this project, based on what you have finished so far, you need to extend it to build semantic and attribute representation for your images.

You may use the a-TRECVID dataset (<http://www.ee.columbia.edu/ln/dvmm/a-TRECVID/>) as which has 0.26 million images of 126 fully labeled attributes.

- It is requested that you train at least 10 attribute classifiers and report its accuracy according to what you tested. You need to partition your dataset to be the training set, and the test set. Remember, you need to train on the training set, then report your results on the testing set. Never train on the test dataset
- You may use your favorite classification algorithm, i.e., kNN or SVM. For SVM, you can use the LibSVM (<http://www.csie.ntu.edu.tw/~cjlin/libsvm/>). Make sure you read their documentation carefully on how to use it. For kNN, you need to implement it by yourself.
- You may use any low level features your team build to train the attribute classifiers. Your team should compare the accuracy on the attribute classifier trained on different low level features.

What to turn in?

You should make a team report in a PDF file and name it as:

[lastname1]_ [lastname2]_ [lastname3]_ [lastname4]_ [lastname5]_ PROJ3.pdf

For your program, you may use any programming language. However, your submission should include the executable, the source code, and a detailed readme file on how to run it. You should have a detailed report in the written part of your project on what you have tested and what are the results you obtained. Be sure to include your own analysis. Please make sure you packed additional dependent libraries, if any, used in your program. If your program cannot run, you lose 0.5 point automatically.

Package your PDF file with the code and supplementary Readme file in a single ZIP file as:

[lastname1]_ [lastname2]_ [lastname3]_ [lastname4]_ [lastname5]_ PROJ3.zip

and please submit it through the Moodle system.

Grade: 10% with bonus

Late submission policy applies universally with no exception.

If you have a compelling excuse, you must inform me at least 2 days before the due date. I don't accept excuses such as "**I am overloaded by other courses**".