PROJECT SPECIFICATION - CLARIFICATIONS
IMAGE CLASSIFICATION

1   Dataset

Please use only CIFAR-10 for testing your classifiers. Also, we provide a subset of the CIFAR-10 dataset, subset_CIFAR10, which has 5,000 images in total. Your classifiers should be trained on this data. Autolab uses **subset_CIFAR10** for training and a **secret test data** for testing your algorithm.

2   Feature Extraction

You can use external binaries provided from VLFeat to write your feature extraction method (e.g. *extract_feature.m*). We provide an example of *extract_feature.m* for you to refer to, which is based on VLFeat. You can also implement your own feature extraction methods from scratch. Having a good feature representation might lead to a good performance, however, we will put more stress on studying/developing/applying machine learning techniques. For the competition and for the three classifiers you are required to try out, you will need to implement all algorithms on your own except for the routines in VLfeat. However, you are welcome to try out existing implementations of additional algorithms and include the results in the final report.

3   Time Limit on Autolab

Your total runtime for train/test should not exceed 20 minutes (with less than 10,000 images).

4   Grading Rubric for Final Report

1. Introduction [20 pts]

   - Motivation [6 pts]
   - Background and Related Work [14 pts]

2. Method [30 pts]

   - Detailed and precise description of method. This should be complete with equations, optimization procedure, and how you plan on evaluating your method.

3. Experiments and results [30 pts]

   - Experiments you performed [20 pts]
   - Results you achieved [10 pts]

4. Conclusion [10 pts]

5. Overall quality of writing [10 pts]

Note that this is grading criteria for the report. Refer to Grading and Deliverables in the project specification.

5 Others

- Your report should look professional as regular conference papers. Submit midway and final reports using NIPS template as described in the project specification. We will give penalty on poor quality of writing.

- Do not attempt to debug your code using Autolab. We restrict your submissions to be only 5 times a day at maximum. We have +200 students, and Audolab will not be able to behave well if too many submissions are made at the same time.

- We highly recommend to attend to the recitation on Thursday, Oct 29, 2015. A TA will answer questions about the final project.