Machine Learning and Pattern Recognition MC886/MO444

University of Campinas (UNICAMP), Institute of Computing (IC)
Assignment #4, 2018s2, Prof. Sandra Avila

Objective

Transfer learning of the pre-trained model to a different problem.

Activities

1. In the Jupyter Notebook, we will load the SqueezeNet architecture[1] trained in the ImageNet dataset[2] and fine-tune it to CIFAR-10. Complete the Jupyter Notebook or modify it, if necessary. The notebook can be downloaded at Moodle.
2. Prepare a 2-page (max.) report with all your findings. It is UP TO YOU to convince the reader that you are proficient on Deep Learning techniques, and the choices it entails.

Dataset

The CIFAR-10 dataset consists of 60,000 32×32 color images in 10 classes, with 6,000 images per class.

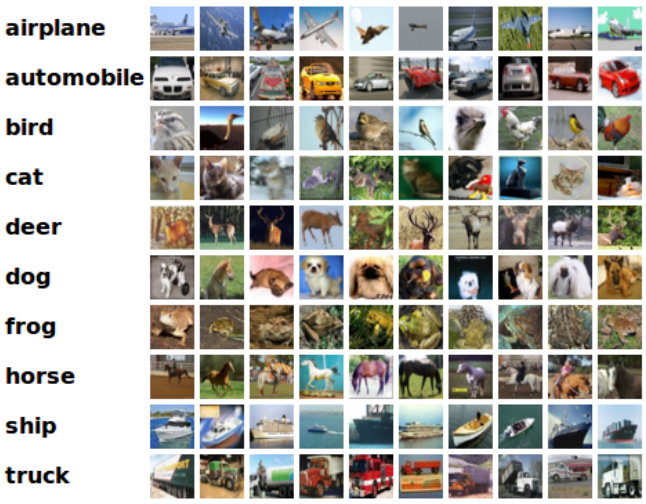

Figure 1: Classes in the dataset, as well as 10 random images from each. Figure reproduced from `https://www.cs.toronto.edu/~kriz/cifar.html`.

Deadline

Friday, **November 23**, 11:59pm.
Penalty policy for late submission: You are not encouraged to submit your assignment after due date. However, in case you did, your grade will be penalized as follows:

- November 24th 11:59pm : grade * 0.75
- November 25th 11:59pm : grade * 0.5
- November 26th 11:59pm : grade * 0.25

[1] https://arxiv.org/pdf/1602.07360.pdf
[2] www.image-net.org

Submission

The report should be written in Portuguese or English. The template for report is available at `https://www.dropbox.com/s/nc6d89otr8ekvjd/report-model.zip`.

Submit a zip file, with the code and the report (PDF file), via Moodle.

This activity is NOT individual, it must be done in pairs (two-person group).