Computer Vision (10224)

Lab 7.5 – Hyper Parameter Tuning and Training Visualization

Goals

- Introduction to Tensorboard
- Train a model on CIFAR10 dataset
- Tune hyper-parameters

Preparatory report

1. The report of lab 7

Lab Session

1. Introduction to Tensorboard, a tool which is used to visualize the training process of the model while it's trained.
2. Short review of CIFAR10
3. Team up to groups of up to 3 students.
4. Modify your work from LAB 7 to suit the CIFAR10 dataset
5. Modify at least one of the following hyper-parameters in order to achieve the best accuracy on the CIFAR 10 dataset.
    - Augmentations
    - Optimizers (Adam, SGD, AdamW …)
    - Architecture: you may use one of the following conv-nets
        i. LeNet
        ii. Alex Net

    iii. ResNet
    iv. VGG
6. Use Tensorboard to visualize your training process
7. The 5 best reports (measured by accuracy) will be rewarded with 5 Points bonus to the general score of the course laboratories.
8. 5 Additional bonus points might be given to reports, with a good accuracy and outstanding data visualization.
9. Each student has to submit his own reports.
10. By the end of today's session your report should be submitted (until 22:00).