NCTU Pattern Recognition, Homework 5

Deadline: June 12, 23:59

Coding (100%):

In this coding assignment, you need to implement the deep neural network by any deep learning framework, e.g., Pytorch, TensorFlow, or Keras, then train the DNN model by the Cifar-10 dataset and try to beat the baseline performance.

Download dataset HERE.

Please note that you should only train and evaluate your model on the provided dataset.
DO NOT download the data from other resources**.**

If you are a newbie in a deep learning framework, we recommend learning **Keras** or **Pytorch**.

- Pytorch tutorial
- Keras tutorial
- TensorFlow tutorial

1. **(100%) Show your accuracy of your model on the provided test data by screenshot the results of your code and paste them on your report**

   Evaluation:

Accuracy	Your scores
acc >= 0.95	100 points
0.9 <= acc < 0.95	90 points
0.80 <= acc < 0.90	80 points
0.75 <= acc < 0.80	70 points
0.65 <= acc < 0.75	60 points
0.6 <= acc < 0.65	50 points
acc <0.6	No points

   Note**:** Keyword to boost your model performance
   1. Data augmentation
   2. Hyperparameter searches for model structure (number of filters, number of convolution/dense layer) and optimizer (learning rate)
   3. Regularization

   Note: If your result is bad, check this tutorial first to debug your model