MNIST Classification with PyTorch

Homework 4 for Deep Learning, Spring 2020

Deadline: 2020.04.14 11:59:00 AM

1 MNIST Classification with MLP and ConvNet

You are required to redo MNIST classification with MLP and ConvNet respectively, **using PyTorch**. No starting codes. It all depends on you! (number of layers/kernels, activations, loss, optimizer, dropout...) **You need to submit all codes and a short report** with the following requirements:

- Introduce the model and record the results in your report, including all hyper-parameters, loss/accuracy values and curves at least.
- Compare the performance under different settings and write down your observations. **You need to compare the performance from three aspects at least**, for example the number of layers/kernels, activations, loss, optimizer, etc.

If you already registered for HUAWEI Cloud, you can accelerate your training using their GPU resources.

2 PyTorch ImageNet Classification Example

We strongly recommend you to read the **official PyTorch ImageNet classification example** carefully (https://github.com/pytorch/examples/tree/master/imagenet). This ImageNet example is well-written, which can gives you some valuable advice about how to design a deep learning model using PyTorch, especially in your own projects. You don't have to submit anything in this part.

3 Attention

- You need to submit all codes and a report (at least two pages **in PDF format**).
- **Plagiarism is not permitted**.