Assignment 2: MNIST classification

[Objective]

Your model should classifiy of the images into 10 classes (0~9).

[Requirements]

1. Implement 4-layer perceptron with Pytorch or Tensorflow.

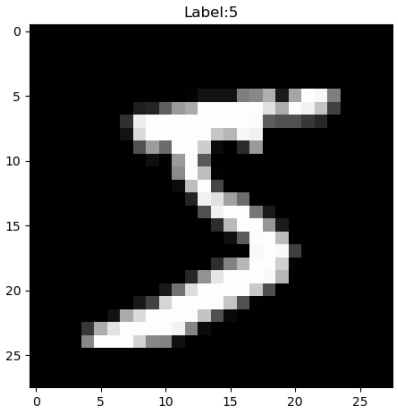
(Basic code is provided)

2. You should experiment with settings stated in the evaluation report, and report the result of each settings.

3. You should attach the plot of the validation dataset accuracy plot.

4. You should report the experimental results.

(all kinds of additional experiments are recommended)



model

"5!"

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[Evaluation report]

MNIST Evaluation Report													
	Batch_size	Activation function	# of layers	Layer size	Epoch	Weight initialization	Optimizer	Learning rate	Weight decay	Dropout	training time	Early stopping epoch	Accuracy
Setting #1	200	ReLU	3	300, 200	30	x	Adam	0.001	X	0			
Setting #2	200	ReLU	4	200, 200, 200	100	x	Adam	0.001	X	0			
Setting #3	200	ReLU	4	600, 600, 800	100	x	Adam	0.001	X	0			
Setting #4	200	ReLU	4	200, 200, 200	100	He	Adam	0.001	X	0			
Setting #5	200	ReLU	4	200, 200, 200	100	He	Adadelta	0.001	X	0			
Setting #6	200	ReLU	4	200, 200, 200	100	He	Adam	0.001	O(lambda=0.01)	0			
Setting #7	200	ReLU	4	200, 200, 200	100	He	Adam	0.01	O(lambda=0.01)	0			
Setting #8	200	ReLU	4	200, 200, 200	100	He	Adam	0.01	O(lambda=0.01)	0.2			
...additional setting													
Validation dataset accuracy plot													

Setting #1 Setting #2 Setting #3 Setting #4

[결과 정리]

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- **Evaluation Criteria**

Simplicity	How concisely did you write the code? - 배점 6점 4 Layers: 4점 Weight initializer: 1점 Dropout: 1점 Weight decay: 1점
Performance	How well did the results of the code perform? - 배점 2점 - acc 97.5%이상 달성 시 만점
Brevity and Clarity	How concisely and clearly did you explain the results? - 배점 2점

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- Due to : **~ 9.20(Sun)**

- Submission : Online submission on blackboard

- Your submission should contain
  1) The whole code of your implementation
  2) The evaluation report

- You must implement the components yourself!
- File name : StudentID_Name.zip