Report of HW5 - EEG Signal Classification

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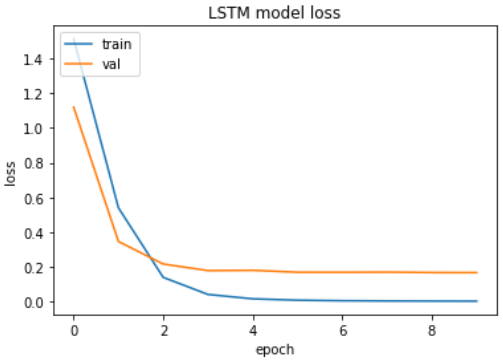
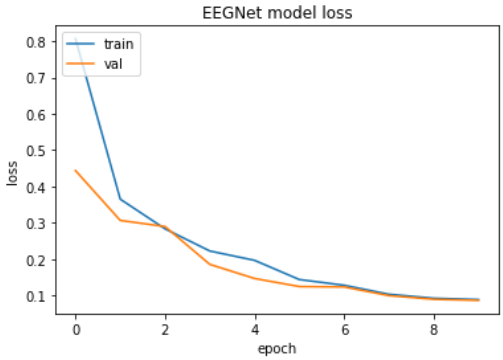
I. Model Implementation Part

	LSTM	EEGNet
Epochs	10	10
Training time	16.3 s	9.36 s
Accuracy (training/validation)	1.0000 / 0.9474	0.9967 / 0.9934
Number of parameters	19,342	48,390
Training loss curve		
Others	batch_size=16 loss='sparse_categorical_crossentropy' metrics='sparse_categorical_accuracy' optimizer=Adam	batch_size=16 loss='sparse_categorical_crossentropy' metrics='sparse_categorical_accuracy' optimizer=Adam

II. For the Model Competition Part : Describe which model you use in competition. If you use other model architecture, explain how you design or choose the model.

I choose EEGNet as my model for competition since the performance is quite good. Both the accuracy of training dataset and validation dataset are over 0.99, and also from the view of loss, it doesn't exist the problem of overfitting. Therefore, I think EEGNet is a good choice for the competition model.

ADDITIONAL NOTE:

I import the package of "ipython-autotime" in this assignment for keeping track of the execution time, which is used for part I. the row of training time in the report. This package will print the execution time of each block as the output.

I use sparse_categorical_crossentropy for loss and sparse_categorical_accuracy for metrics since sparse category can deal with multi-classes classification and its label doesn't need to do one-hot encoding.