

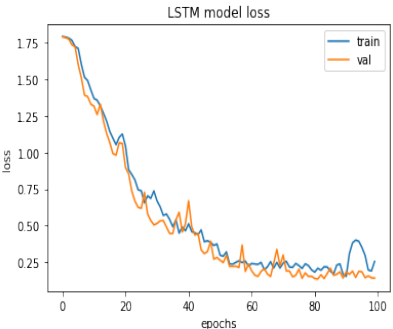
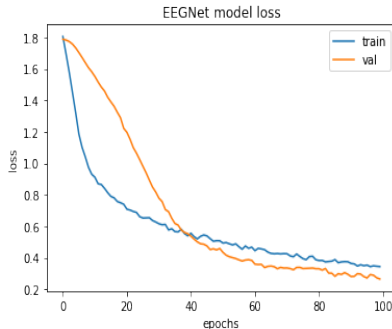
EEG Signal Classification

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1 Model Implementation

The table below shows the performance and relative parameters of LSTM and EEGNet.

	LSTM	EEGNet
epochs	100	100
training time	25.69 sec	4 min 23 sec
training accuracy	0.9189	0.9603
validation accuracy	0.9737	0.9671
total parameters	1,129,086	2,118
batch size	64	64
loss function	categorical cross entropy	categorical cross entropy
optimizer	adam	adam
training loss curve		

Based on the results, LSTM and EEGNet model both have great performance on classifying EEG signal, which have reached the accuracy above 0.9 on training and validation set.

2 Model Competition

In this part, I choose EEGNet model that I have implemented earlier as my competition model. The reason is that EEGNet already gets a great performance on EEG signal dataset in the model implementation part. Besides, its training loss curve is relatively stable compared to my LSTM model. Therefore, here I choose EEGNet model rather than LSTM model in spite of the fact that LSTM model has a greater performance on validation set.