1. Model architecture, optimization method andparameters

1.1 Modelarchitecture

(1) **Convolutionlayer1** 64 channels, k = 4, s = 1, P = 2*(with batchnormalization)*

(2) Convolutionlayer2 64 channels, k = 4, s = 1, P =2
(3) MaxPooling s = 2, k =2
(4) Dropout r =0 . 1

(5) **Convolutionlayer3** 64 channels, k = 4, s = 1, P = 2*(with batchnormalization)*

(6) Convolutionlayer4 64 channels, k = 4, s = 1, P =2
(7) MaxPooling s = 2, k =2
(8) Dropout r =0.2

(9) **Convolutionlayer5** 64 channels, k = 4, s = 1, P = 2*(with Batchnormalization)*

(10) Convolutionlayer6 64 channels, k = 3, s = 1, P =0
(11) Dropout r = 0.4

(12) **Convolutionlayer7** 64 channels, k = 3, s = 1, P = 0*(with Batchnormalization)*

(13) **Convolutionlayer8** 64 channels, k = 3, s = 1, P = 0*(with Batchnormalization)*
(14) Dropout r =0.5

(15) Fully connectedlayer1 500units

(16) Fully connectedlayer2 500units

(17) Softmaxfunction

(k: kernal_size; s: stride; P: padding; r: dropping rate)

1.2 Optimizationmethod

We use**ADAM**for optimization method with**learning rate of 0.001**. Note that we also apply data augmentation on training set composed by**random crop**and**horizontal flip**.

2. Results

2.1 Training

The following paragraph describe the loss during training epoch. We compute the loss for every 2000 steps in each epoch bytorch.nn.CrossEntropyLoss().

Finally, our model gets**82% accuracy**on test set.