## **Deep Learning Homework 2**

## Initialization

# Parameter Setting

input num = 4096

hidden num = 256

frame num = 80

batch size = 256

epoch num = 100

## **Training**

```
5.630229
Epoch:
         0
             Loss:
                                       Epoch:
                                                60
                                                     Loss:
Epoch:
             Loss:
                     4.9076657
                                                             2.191262
         1
Epoch:
         2
            Loss:
                     4.820754
                                       Epoch:
                                                61
                                                     Loss:
                                                             2.1968126
Epoch:
                     4.454028
                                       Epoch:
                                                62
                                                    Loss:
                                                             2.1958098
             Loss:
                                                63
                                                             2.2393909
Epoch:
             Loss:
                     4.311232
                                       Epoch:
                                                    Loss:
                                                             2.2356517
Epoch:
         5
                                       Epoch:
                                                64
                                                    Loss:
            Loss:
                     4.262207
                                                65
                                                     Loss:
Epoch:
            Loss:
                     4.0875144
                                       Epoch:
                                                             2.2206266
                     3.9360664
                                                66
                                       Epoch:
                                                     Loss:
                                                             2.1033704
Epoch:
             Loss:
                     4.0129623
                                       Epoch:
                                                     Loss:
         8
             Loss:
                                                67
                                                             2.1108725
Epoch:
                                                             2.037119
Epoch:
         9
             Loss:
                     3.5818005
                                       Epoch:
                                                68
                                                     Loss:
                                                69
                                                     Loss:
         10
                      3.6289895
                                       Epoch:
                                                             1.9455882
Epoch:
              Loss:
Epoch:
Epoch:
Epoch:
Epoch:
Epoch:
                                       Epoch:
                                                70
                                                     Loss:
         11
              Loss:
                      3.6179597
                                                             2.002741
         12
                                       Epoch:
                                                71
                                                     Loss:
              Loss:
                      3.4429686
                                                             2.0114923
                                                72
                                       Epoch:
                                                     Loss:
                                                             2.0531192
         13
              Loss:
                      3.473043
                                                73
74
              Loss:
                      3.3311565
                                       Epoch:
                                                    Loss:
                                                             1.9922374
         14
                      3.5481455
                                       Epoch:
                                                    Loss:
         15
              Loss:
                                                             2.143392
                                                75
76
Epoch:
         16
              Loss:
                      3.361484
                                       Epoch:
                                                    Loss:
                                                             2.082417
Epoch:
         17
              Loss:
                                       Epoch:
                                                     Loss:
                                                             2.007904
                      3.395161
                                                             2.0564983
Epoch:
         18
              Loss:
                      3.218151
                                       Epoch:
                                                77
                                                     Loss:
Epoch:
         19
              Loss:
                      3.2395139
                                       Epoch:
                                                78
                                                     Loss:
                                                             1.934799
                                                79
                                                             1.8857403
Epoch:
         20
                      3.203583
                                       Epoch:
                                                     Loss:
              Loss:
                                                80
                                                     Loss:
                                                             2.0248127
                                       Epoch:
Epoch:
         21
              Loss:
                      3.1930935
         22
                      3.2044635
                                       Epoch:
                                                81
                                                     Loss:
                                                             1.9543321
              Loss:
Epoch:
                                                             1.8169515
         23
              Loss:
                      2.9775429
                                       Epoch:
                                                82
                                                     Loss:
Epoch:
         24
                                       Epoch:
                                                83
                                                     Loss:
                                                             1.9476705
Epoch:
              Loss:
                      2.9781685
                                       Epoch:
Epoch:
         25
              Loss:
                      3.2165415
                                                84
                                                     Loss:
                                                             1.9241073
Epoch:
Epoch:
Epoch:
Epoch:
Epoch:
Epoch:
         26
27
                                                85
              Loss:
                      2.9780107
                                                     Loss:
                                                             1.8343048
                                       Epoch:
              Loss:
                      2.911487
                                                86
                                                     Loss:
                                                             1.9604925
         28
                                       Epoch:
                                                87
                                                             1.9532624
                                                     Loss:
              Loss:
                      2.957936
         29
                                       Epoch:
                                                88
                                                     Loss:
                                                             1.9568689
              Loss:
                      2.82527
         30
              Loss:
                      2.8408766
                                       Epoch:
                                                89
                                                     Loss:
                                                             1.8409209
                                                     Loss:
Epoch:
                                       Epoch:
                                                90
                                                             1.8089044
         31
              Loss:
                      2.8280783
Epoch:
         32
              Loss:
                                       Epoch:
                                                91
                                                     Loss:
                                                             1.9500744
                      2.7620769
Epoch:
         33
              Loss:
                      2.6656566
                                       Epoch:
                                                92
                                                     Loss:
                                                             1.7686573
         34
                                                93
                                                             1.8570846
Epoch:
              Loss:
                      2.6453648
                                       Epoch:
                                                     Loss:
                                                94
         35
                                                             1.958425
Epoch:
              Loss:
                      2.580123
                                       Epoch:
                                                     Loss:
                                                95
                                                             1.7313877
         36
                                       Epoch:
                                                     Loss:
Epoch:
                      2.6155045
              Loss:
         37
                                       Epoch:
                                                96
                                                     Loss:
                                                             1.8887501
                      2.675141
Epoch:
              Loss:
                                                97
Epoch:
         38
              Loss:
                      2.5830321
                                       Epoch:
                                                     Loss:
                                                             1.7533691
                                       Epoch:
                                                98
                                                     Loss:
                                                             1.8344904
         39
              Loss:
                      2.6673238
Epoch:
                                      Epoch: 99 I
Model saved:
Epoch:
         40
              Loss:
                      2.674969
                                                     Loss:
                                                             1.934429
                      2.4972036
                                                       ./save/model-9400
Epoch:
         41
              Loss:
```

## Test

The average bleu score is 0.633.

(tf) [kzhai@node1903 MLDS\_hw2\_1\_data]\$ python bleu\_eval.py MLDS\_hw2\_1\_dataoutput\_testset.txt Average bleu score is 0.6333032398744076

To run the file

Type:

(tf) [kzhai@node1903 MLDS\_hw2\_1\_data]\$ sh ./hw2\_seq2seq.sh ./testing\_data/feat/ MLDS\_hw2\_1\_dataoutput\_testset.txt

The result is:

Model restoration completed. Testing Output Generated. Average bleu score is 0.6333032398744076