```
epoch 1, step: 0, tr loss: 1369.63, vl loss: 1644.89, tr err: 6.31, vl err: 7.77
epoch 2, step: 0, tr loss: 1507.26, vl loss: 1606.90, tr err: 7.77, vl err: 7.46
epoch 3, step: 0, tr loss: 1527.81, vl loss: 1551.59, tr err: 7.46, vl err: 6.80
epoch 4, step: 0, tr_loss: 1506.10, vl_loss: 1481.24, tr_err: 6.80, vl_err: 5.98
epoch 5, step: 0, tr loss: 1458.91, vl loss: 1406.71, tr err: 5.98, vl err: 5.26
epoch 6, step: 0, tr_loss: 1400.53, vl_loss: 1333.47, tr_err: 5.26, vl_err: 4.48
epoch 7, step: 0, tr loss: 1338.64, vl loss: 1264.62, tr err: 4.48, vl err: 3.56
epoch 8, step: 0, tr loss: 1277.75, vl loss: 1200.58, tr err: 3.56, vl err: 2.69
epoch 9, step: 0, tr loss: 1219.36, vl loss: 1141.08, tr err: 2.69, vl err: 2.04
epoch 10, step: 0, tr_loss: 1163.93, vl_loss: 1086.84, tr_err: 2.04, vl_err: 1.58
time elapsed for 200 steps: 1.117,
('Sample mini-batch results: \npredicted string: ', array(["'", 'T', '', 'R', '', 'Y', 'S', 'A', '', 'J', 'B',
'A', 'E',
    'A', 'N', 'Y', 'B', 'K', 'A', 'F', 'O', ' ', 'A', 'M', 'A', 'R',
    'A', 'M', 'R', 'A', 'I', 'P', 'R', ' ', 'R', 'Y', ' ', 'A', "'",
    'A', 'S', 'E', "'", ' ', 'H', 'N', 'Q', 'L', 'E', 'D', ' ', 'D',
    'W', 'D', 'U', ' ', 'A', "'", 'L', 'U', 'Q', 'C', ' ', 'I', 'E',
    'P', 'U', 'H', 'U', 'M', 'D', 'P', ' ', 'A', ' ', 'P', ' ', 'A',
    ngagaga an an didididi k
    dtype='|S1'))
('actual string1: ', array(['I', ' ', 'W', 'O', 'U', 'L', 'D', ' ', 'L', 'I', 'K', 'E', ' ',
    'T', 'O', ' ', 'F', 'I', 'N', 'D', ' ', 'A', 'N', ' ', 'I', 'N',
    'D', 'I', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A',
    'N', 'T', '', 'A', 'N', 'D', '', 'I', 'T', '', 'S', 'H', 'O',
    'U', 'L', 'D', ' ', 'B', 'E', ' ', 'I', 'N', ' ', 'T', 'H', 'E',
    '', 'G', 'I', 'R', 'T', 'O', 'N', '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 11, step: 0, tr loss: 1112.55, vl loss: 1037.14, tr err: 1.58, vl err: 1.22
epoch 12, step: 0, tr_loss: 1064.85, vl_loss: 992.15, tr_err: 1.22, vl_err: 1.07
epoch 13, step: 0, tr loss: 1021.18, vl loss: 950.26, tr err: 1.07, vl err: 0.95
epoch 14, step: 0, tr_loss: 980.22, vl_loss: 911.08, tr_err: 0.95, vl_err: 0.89
epoch 15, step: 0, tr loss: 941.65, vl loss: 874.63, tr err: 0.89, vl err: 0.84
epoch 16, step: 0, tr_loss: 905.56, vl_loss: 841.51, tr_err: 0.84, vl_err: 0.82
epoch 17, step: 0, tr_loss: 872.58, vl_loss: 810.78, tr_err: 0.82, vl_err: 0.83
epoch 18, step: 0, tr loss: 841.83, vl loss: 781.39, tr err: 0.83, vl err: 0.80
epoch 19, step: 0, tr loss: 812.35, vl loss: 753.43, tr err: 0.80, vl err: 0.83
epoch 20, step: 0, tr loss: 784.24, vl loss: 727.06, tr err: 0.83, vl err: 0.81
time_elapsed for 200 steps: 1.136,
('Sample mini-batch results: \npredicted string: ', array(['', 'N', '', 'A', '', 'A', '', 'E', '', 'E', 'K',
'U', ' ',
```

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'N', ' ', 'A', ' ', 'T', ' ', 'L', ' ', 'A', ' ', 'A', ' ', 'A',
    '', 'A', '', 'A', ''],
   dtvpe='|S1'))
('actual string1: ', array(['I', ' ', 'A', 'M', ' ', 'L', 'O', 'O', 'K', 'I', 'N', 'G', ' ',
    'F', 'O', 'R', ' ', 'A', ' ', 'P', 'U', 'B', ' ', 'I', 'N', ' ',
    'T', 'H', 'E', ' ', 'R', 'I', 'V', 'E', 'R', 'S', 'I', 'D', 'E',
    '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 21, step: 0, tr_loss: 757.66, vl_loss: 702.44, tr_err: 0.81, vl_err: 0.78
epoch 22, step: 0, tr loss: 732.77, vl loss: 679.32, tr err: 0.78, vl err: 0.72
epoch 23, step: 0, tr loss: 709.34, vl loss: 657.66, tr err: 0.72, vl err: 0.75
epoch 24, step: 0, tr loss: 687.33, vl loss: 637.28, tr err: 0.75, vl err: 0.74
epoch 25, step: 0, tr_loss: 666.57, vl_loss: 618.10, tr_err: 0.74, vl_err: 0.69
epoch 26, step: 0, tr_loss: 647.01, vl_loss: 599.96, tr_err: 0.69, vl_err: 0.68
epoch 27, step: 0, tr loss: 628.47, vl loss: 582.84, tr err: 0.68, vl err: 0.65
epoch 28, step: 0, tr loss: 610.94, vl loss: 566.64, tr err: 0.65, vl err: 0.57
epoch 29, step: 0, tr loss: 594.33, vl loss: 551.33, tr err: 0.57, vl err: 0.56
epoch 30, step: 0, tr_loss: 578.60, vl_loss: 536.83, tr_err: 0.56, vl_err: 0.53
time elapsed for 200 steps: 1.126,
('Sample mini-batch results: \npredicted string: ', array([' ', 'O', ' ', 'O', 'I', 'N', ' ', 'I', ' ', 'N', 'T',
'E', 'R',
    ' ', 'E', 'T', ' ', 'O', ' ', 'E', 'T', 'I', ' ', 'N', ' ', 'L',
    'O', 'L', '', 'N', '', 'C', '', 'R', 'L', 'R', 'N', ''],
   dtype='|S1'))
('actual string1: ', array(['I', '', 'A', 'M', '', 'L', 'O', 'O', 'K', 'I', 'N', 'G', '',
    'F', 'O', 'R', ' ', 'A', ' ', 'P', 'U', 'B', ' ', 'I', 'N', ' ',
    'T', 'H', 'E', ' ', 'R', 'I', 'V', 'E', 'R', 'S', 'I', 'D', 'E',
    '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 31, step: 0, tr loss: 563.69, vl loss: 522.97, tr err: 0.53, vl err: 0.49
epoch 32, step: 0, tr loss: 549.43, vl loss: 509.72, tr err: 0.49, vl err: 0.40
epoch 33, step: 0, tr_loss: 535.77, vl_loss: 496.99, tr_err: 0.40, vl_err: 0.34
epoch 34, step: 0, tr loss: 522.65, vl loss: 484.79, tr err: 0.34, vl err: 0.26
epoch 35, step: 0, tr_loss: 510.07, vl_loss: 473.16, tr_err: 0.26, vl_err: 0.21
epoch 36, step: 0, tr loss: 498.06, vl loss: 462.08, tr err: 0.21, vl err: 0.21
epoch 37, step: 0, tr loss: 486.61, vl loss: 451.53, tr err: 0.21, vl err: 0.19
epoch 38, step: 0, tr loss: 475.69, vl loss: 441.44, tr err: 0.19, vl err: 0.20
epoch 39, step: 0, tr_loss: 465.24, vl_loss: 431.82, tr_err: 0.20, vl_err: 0.18
epoch 40, step: 0, tr loss: 455.26, vl loss: 422.57, tr err: 0.18, vl err: 0.16
time elapsed for 200 steps: 1.126,
('Sample mini-batch results: \npredicted string: ', array(['I', "'", 'M', ' ', 'O', 'K', 'I', 'N', 'G', ' ',
'F', 'O', ' ',
    'A', 'N', ' ', 'E', 'X', 'P', 'E', 'N', 'S', 'I', ' ', 'R', 'E',
    'S', 'T', 'A', 'U', 'R', 'A', 'N', 'T', ' ', ' ', '
```

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dtvpe='|S1'))
('actual string1: ', array(['I', ' ', 'W', 'O', 'U', 'L', 'D', ' ', 'L', 'I', 'K', 'E', ' ',
    'T', 'O', ' ', 'F', 'I', 'N', 'D', ' ', 'A', 'N', ' ', 'I', 'N',
    'D', 'I', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A',
    'N', 'T', ' ', 'A', 'N', 'D', ' ', 'I', 'T', ' ', 'S', 'H', 'O',
    'U', 'L', 'D', '', 'B', 'E', '', 'I', 'N', '', 'T', 'H', 'E',
    '', 'G', 'I', 'R', 'T', 'O', 'N', '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 41, step: 0, tr loss: 445.67, vl loss: 413.69, tr err: 0.16, vl err: 0.16
epoch 42, step: 0, tr loss: 436.45, vl loss: 405.19, tr err: 0.16, vl err: 0.16
epoch 43, step: 0, tr_loss: 427.62, vl_loss: 397.09, tr_err: 0.16, vl_err: 0.16
epoch 44, step: 0, tr loss: 419.19, vl loss: 389.33, tr err: 0.16, vl err: 0.15
epoch 45, step: 0, tr loss: 411.11, vl loss: 381.82, tr err: 0.15, vl err: 0.13
epoch 46, step: 0, tr loss: 403.29, vl loss: 374.58, tr err: 0.13, vl err: 0.11
epoch 47, step: 0, tr loss: 395.75, vl loss: 367.58, tr err: 0.11, vl err: 0.10
epoch 48, step: 0, tr_loss: 388.45, vl_loss: 360.84, tr_err: 0.10, vl_err: 0.10
epoch 49, step: 0, tr loss: 381.43, vl loss: 354.34, tr err: 0.10, vl err: 0.10
epoch 50, step: 0, tr loss: 374.65, vl loss: 348.05, tr err: 0.10, vl err: 0.10
time elapsed for 200 steps: 1.163,
('Sample mini-batch results: \npredicted string: ', array(['I', "'", 'M', ' ', 'L', 'O', 'K', 'I', 'N', 'G', '
', 'F', 'O',
    'R', ' ', 'A', 'N', ' ', 'E', 'X', 'P', 'E', 'N', 'S', 'I', 'V',
    '', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A', 'N', 'T', '', '',
    dtype='|S1'))
('actual string1: ', array(['I', '', 'W', 'O', 'U', 'L', 'D', '', 'L', 'I', 'K', 'E', '',
    'T', 'O', ' ', 'F', 'I', 'N', 'D', ' ', 'A', 'N', ' ', 'I', 'N',
    'D', 'I', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A',
    'N', 'T', '', 'A', 'N', 'D', '', 'I', 'T', '', 'S', 'H', 'O',
    'U', 'L', 'D', ' ', 'B', 'E', ' ', 'I', 'N', ' ', 'T', 'H', 'E',
    '', 'G', 'I', 'R', 'T', 'O', 'N', '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 51, step: 0, tr loss: 368.09, vl loss: 342.00, tr err: 0.10, vl err: 0.10
epoch 52, step: 0, tr_loss: 361.76, vl_loss: 336.16, tr_err: 0.10, vl_err: 0.10
epoch 53, step: 0, tr loss: 355.66, vl loss: 330.51, tr err: 0.10, vl err: 0.09
epoch 54, step: 0, tr loss: 349.75, vl loss: 325.04, tr err: 0.09, vl err: 0.09
epoch 55, step: 0, tr loss: 344.03, vl loss: 319.74, tr err: 0.09, vl err: 0.09
epoch 56, step: 0, tr_loss: 338.49, vl_loss: 314.62, tr err: 0.09, vl err: 0.09
epoch 57, step: 0, tr loss: 333.13, vl loss: 309.66, tr err: 0.09, vl err: 0.09
epoch 58, step: 0, tr loss: 327.94, vl loss: 304.87, tr err: 0.09, vl err: 0.09
epoch 59, step: 0, tr loss: 322.91, vl loss: 300.21, tr err: 0.09, vl err: 0.09
```

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epoch 60, step: 0, tr loss: 318.04, vl loss: 295.71, tr err: 0.09, vl err: 0.09
time elapsed for 200 steps: 1.130,
('Sample mini-batch results: \npredicted string: ', array(['I', "'", 'M', '', 'L', 'O', 'K', 'I', 'N', 'G', '
', 'F', 'O',
    'R', ' ', 'A', 'N', ' ', 'E', 'X', 'P', 'E', 'N', 'S', 'I', 'V',
    '', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A', 'N', 'T', '',
    dtype='|S1'))
('actual string1: ', array(['I', '', 'W', 'O', 'U', 'L', 'D', ' ', 'L', 'I', 'K', 'E', ' ',
    'T', 'O', ' ', 'F', 'I', 'N', 'D', ' ', 'A', 'N', ' ', 'I', 'N',
    'D', 'I', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A',
    'N', 'T', ' ', 'A', 'N', 'D', ' ', 'I', 'T', ' ', 'S', 'H', 'O',
    'U', 'L', 'D', ' ', 'B', 'E', ' ', 'I', 'N', ' ', 'T', 'H', 'E',
    '', 'G', 'I', 'R', 'T', 'O', 'N', '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 61, step: 0, tr_loss: 313.32, vl_loss: 291.34, tr_err: 0.09, vl_err: 0.09
epoch 62, step: 0, tr loss: 308.73, vl loss: 287.11, tr err: 0.09, vl err: 0.08
epoch 63, step: 0, tr loss: 304.30, vl loss: 283.01, tr err: 0.08, vl err: 0.09
epoch 64, step: 0, tr loss: 299.99, vl loss: 279.02, tr err: 0.09, vl err: 0.09
epoch 65, step: 0, tr loss: 295.80, vl loss: 275.14, tr err: 0.09, vl err: 0.09
epoch 66, step: 0, tr_loss: 291.72, vl_loss: 271.36, tr_err: 0.09, vl_err: 0.09
epoch 67, step: 0, tr loss: 287.76, vl loss: 267.69, tr err: 0.09, vl err: 0.09
epoch 68, step: 0, tr loss: 283.90, vl loss: 264.11, tr err: 0.09, vl err: 0.09
epoch 69, step: 0, tr loss: 280.14, vl loss: 260.63, tr err: 0.09, vl err: 0.09
epoch 70, step: 0, tr_loss: 276.47, vl_loss: 257.24, tr_err: 0.09, vl_err: 0.09
time elapsed for 200 steps: 1.155,
('Sample mini-batch results: \npredicted string: ', array(['L', 'O', 'K', 'I', 'N', 'G', ' ', 'F', 'O', 'R', '
', 'A', ' ',
    'P', 'U', 'B', ' ', 'A', 'N', 'D', ' ', 'I', 'T', ' ', 'S', 'H',
    'O', 'U', '', 'H', '', 'E', '', 'I', 'N', 'T', 'E', 'R', 'N',
    'E', 'T', ' ', 'C', 'O', 'N', 'E', 'C', 'T', 'I', 'O', 'N', ' '
    'A', 'N', 'D', ' ', 'A', 'L', 'O', 'W', ' ', 'C', 'H', 'l', 'L',
    'D', 'R', 'E', 'N', ' ', ' '],
   dtype='|S1'))
('actual string1: ', array(['I', '', 'A', 'M', '', 'L', 'O', 'O', 'K', 'I', 'N', 'G', '',
    'F', 'O', 'R', ' ', 'A', ' ', 'P', 'U', 'B', ' ', 'I', 'N', ' ',
    'T', 'H', 'E', ' ', 'R', 'I', 'V', 'E', 'R', 'S', 'I', 'D', 'E',
    '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 71, step: 0, tr loss: 272.91, vl loss: 253.94, tr err: 0.09, vl err: 0.09
epoch 72, step: 0, tr loss: 269.43, vl loss: 250.71, tr err: 0.09, vl err: 0.08
epoch 73, step: 0, tr loss: 266.04, vl loss: 247.56, tr err: 0.08, vl err: 0.08
epoch 74, step: 0, tr loss: 262.72, vl loss: 244.49, tr err: 0.08, vl err: 0.08
```

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epoch 75, step: 0, tr loss: 259.49, vl loss: 241.50, tr err: 0.08, vl err: 0.08
epoch 76, step: 0, tr loss: 256.34, vl loss: 238.59, tr err: 0.08, vl err: 0.08
epoch 77, step: 0, tr loss: 253.28, vl loss: 235.74, tr err: 0.08, vl err: 0.08
epoch 78, step: 0, tr_loss: 250.27, vl_loss: 232.95, tr_err: 0.08, vl_err: 0.08
epoch 79, step: 0, tr loss: 247.34, vl loss: 230.23, tr err: 0.08, vl err: 0.08
epoch 80, step: 0, tr loss: 244.47, vl loss: 227.56, tr err: 0.08, vl err: 0.08
time elapsed for 200 steps: 1.096,
('Sample mini-batch results: \npredicted string: ', array(['L', 'O', 'K', 'I', 'N', 'G', ', 'F', 'O', 'R', '
', 'A', ' ',
    'P', 'U', 'B', ' ', 'A', 'N', 'D', ' ', 'I', 'T', ' ', 'S', 'H',
    'O', 'U', 'I', 'D', ' ', 'H', ' ', 'E', ' ', 'I', 'N', 'T', 'E',
    'R', 'N', 'E', 'T', ' ', 'C', 'O', 'N', 'E', 'C', 'T', 'I', 'O',
    'N', '', 'A', 'N', 'D', '', 'A', 'L', 'O', 'W', '', 'C', 'H',
    'I', 'L', 'D', 'R', 'E', 'N', ' ', ' '],
    dtype='|S1'))
('actual string1: ', array(['I', '', 'A', 'M', '', 'L', 'O', 'O', 'K', 'I', 'N', 'G', '',
    'F', 'O', 'R', ' ', 'A', ' ', 'P', 'U', 'B', ' ', 'I', 'N', '
    'T', 'H', 'E', ' ', 'R', 'I', 'V', 'E', 'R', 'S', 'I', 'D', 'E',
    '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 81, step: 0, tr_loss: 241.66, vl_loss: 224.96, tr_err: 0.08, vl_err: 0.08
epoch 82, step: 0, tr loss: 238.92, vl loss: 222.40, tr err: 0.08, vl err: 0.08
epoch 83, step: 0, tr_loss: 236.22, vl_loss: 219.90, tr_err: 0.08, vl_err: 0.08
epoch 84, step: 0, tr loss: 233.58, vl loss: 217.45, tr err: 0.08, vl err: 0.08
epoch 85, step: 0, tr loss: 231.00, vl loss: 215.05, tr err: 0.08, vl err: 0.07
epoch 86, step: 0, tr_loss: 228.48, vl_loss: 212.71, tr_err: 0.07, vl_err: 0.07
epoch 87, step: 0, tr_loss: 226.01, vl_loss: 210.41, tr_err: 0.07, vl_err: 0.07
epoch 88, step: 0, tr loss: 223.58, vl loss: 208.16, tr err: 0.07, vl err: 0.07
epoch 89, step: 0, tr_loss: 221.21, vl_loss: 205.96, tr_err: 0.07, vl_err: 0.08
epoch 90, step: 0, tr loss: 218.89, vl loss: 203.80, tr err: 0.08, vl err: 0.08
time elapsed for 200 steps: 1.115,
('Sample mini-batch results: \npredicted string: ', array(['L', 'O', 'K', 'I', 'N', 'G', ' ', 'F', 'O', 'R', '
', 'A', ' ',
    'P', 'U', 'B', ' ', 'A', 'N', 'D', ' ', 'I', 'T', ' ', 'S', 'H',
    'O', 'C', 'I', 'T', ' ', 'H', 'E', ' ', 'I', 'N', 'T', 'E', 'R',
    'N', 'E', 'T', ' ', 'C', 'O', 'N', 'E', 'C', 'T', 'I', 'O', 'N',
    '', 'A', 'N', 'D', '', 'A', 'L', 'O', 'W', '', 'C', 'H', 'I',
    'L', 'D', 'R', 'E', 'N', ' ', ' ', ' ', ' '],
    dtype='|S1'))
('actual string1: ', array(['I', '', 'A', 'M', '', 'L', 'O', 'O', 'K', 'I', 'N', 'G', '',
    'F', 'O', 'R', ' ', 'A', ' ', 'P', 'U', 'B', ' ', 'I', 'N', ' ',
    'T', 'H', 'E', ' ', 'R', 'I', 'V', 'E', 'R', 'S', 'I', 'D', 'E',
    '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 91, step: 0, tr_loss: 216.62, vl_loss: 201.69, tr_err: 0.08, vl_err: 0.07
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epoch 92, step: 0, tr loss: 214.39, vl loss: 199.63, tr err: 0.07, vl err: 0.07
epoch 93, step: 0, tr loss: 212.21, vl loss: 197.60, tr err: 0.07, vl err: 0.07
epoch 94, step: 0, tr loss: 210.07, vl loss: 195.61, tr err: 0.07, vl err: 0.07
epoch 95, step: 0, tr_loss: 207.97, vl_loss: 193.67, tr_err: 0.07, vl_err: 0.07
epoch 96, step: 0, tr loss: 205.92, vl loss: 191.76, tr err: 0.07, vl err: 0.07
epoch 97, step: 0, tr_loss: 203.90, vl_loss: 189.88, tr_err: 0.07, vl_err: 0.07
epoch 98, step: 0, tr loss: 201.92, vl loss: 188.04, tr err: 0.07, vl err: 0.07
epoch 99, step: 0, tr loss: 199.97, vl loss: 186.23, tr err: 0.07, vl err: 0.07
epoch 100, step: 0, tr loss: 198.06, vl loss: 184.46, tr err: 0.07, vl err: 0.07
time_elapsed for 200 steps: 1.137,
('Sample mini-batch results: \npredicted string: ', array(['I', "'", 'M', ' ', 'L', 'O', 'K', 'I', 'N', 'G', '
', 'F', 'O',
    'R', '', 'P', 'U', 'B', '', 'F', 'O', 'D', '', 'R', 'E', 'S',
    'T', 'A', 'U', 'R', 'A', 'N', 'T', ' ', 'A', 'N', 'D', ' ', 'I',
    'T', ' ', 'S', 'H', 'O', 'U', 'L', 'D', ' ', 'B', 'E', ' ', 'I',
    'N', '', 'T', 'H', 'E', '', 'U', 'I', 'D', 'Y', '', 'C', 'E',
    'N', 'T', 'E', 'R', ' ', 'A', 'R', 'E', 'A'],
    dtype='|S1'))
('actual string1: ', array(['I', "'", 'M', '', 'L', 'O', 'O', 'K', 'I', 'N', 'G', ' ', 'F',
    'O', 'R', ' ', 'A', ' ', 'M', 'E', 'D', 'I', 'T', 'E', 'R', 'R',
    'A', 'N', 'E', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R',
    'A', 'N', 'T'],
   dtype='|S1'))
epoch 101, step: 0, tr loss: 196.19, vl loss: 182.72, tr err: 0.07, vl err: 0.07
epoch 102, step: 0, tr loss: 194.35, vl loss: 181.01, tr err: 0.07, vl err: 0.07
epoch 103, step: 0, tr loss: 192.55, vl loss: 179.34, tr err: 0.07, vl err: 0.07
epoch 104, step: 0, tr_loss: 190.78, vl_loss: 177.69, tr_err: 0.07, vl_err: 0.07
epoch 105, step: 0, tr loss: 189.04, vl loss: 176.08, tr err: 0.07, vl err: 0.07
epoch 106, step: 0, tr loss: 187.34, vl loss: 174.49, tr err: 0.07, vl err: 0.07
epoch 107, step: 0, tr loss: 185.66, vl loss: 172.93, tr err: 0.07, vl err: 0.07
epoch 108, step: 0, tr_loss: 184.01, vl_loss: 171.39, tr_err: 0.07, vl_err: 0.07
epoch 109, step: 0, tr loss: 182.39, vl loss: 169.89, tr err: 0.07, vl err: 0.08
epoch 110, step: 0, tr_loss: 180.79, vl_loss: 168.40, tr_err: 0.08, vl_err: 0.07
time elapsed for 200 steps: 1.222,
('Sample mini-batch results: \npredicted string: ', array(['I', "'", 'M', ' ', 'L', 'O', 'K', 'I', 'N', 'G', '
', 'F', 'O',
    'R', ' ', 'P', 'U', 'B', ' ', 'F', 'O', 'D', ' ', 'R', 'E', 'S',
    'T', 'A', 'U', 'R', 'A', 'N', 'T', ' ', 'A', 'N', 'D', ' ', 'I',
    'T', ' ', 'S', 'H', 'O', 'U', 'L', 'D', ' ', 'B', 'E', ' ', 'I',
    'N', '', 'T', 'H', 'E', '', 'U', 'I', 'D', 'Y', '', 'C', 'E',
    'N', 'T', 'E', 'R', ' ', 'A', 'R', 'E', 'A'],
    dtype='|S1'))
('actual string1: ', array(['I', "'", 'M', '', 'L', 'O', 'O', 'K', 'I', 'N', 'G', ' ', 'F',
    'O', 'R', ' ', 'A', ' ', 'M', 'E', 'D', 'I', 'T', 'E', 'R', 'R',
    'A', 'N', 'E', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R',
    'A', 'N', 'T'],
```

```
dtype='|S1'))
epoch 111, step: 0, tr loss: 179.23, vl loss: 166.95, tr err: 0.07, vl err: 0.07
epoch 112, step: 0, tr_loss: 177.69, vl_loss: 165.51, tr_err: 0.07, vl_err: 0.07
epoch 113, step: 0, tr loss: 176.17, vl loss: 164.11, tr err: 0.07, vl err: 0.07
epoch 114, step: 0, tr_loss: 174.68, vl_loss: 162.72, tr_err: 0.07, vl_err: 0.07
epoch 115, step: 0, tr loss: 173.22, vl loss: 161.36, tr err: 0.07, vl err: 0.07
epoch 116, step: 0, tr loss: 171.78, vl loss: 160.03, tr err: 0.07, vl err: 0.07
epoch 117, step: 0, tr loss: 170.36, vl loss: 158.71, tr err: 0.07, vl err: 0.07
epoch 118, step: 0, tr_loss: 168.97, vl_loss: 157.41, tr_err: 0.07, vl_err: 0.07
epoch 119, step: 0, tr loss: 167.60, vl loss: 156.13, tr err: 0.07, vl err: 0.07
epoch 120, step: 0, tr loss: 166.24, vl loss: 154.86, tr err: 0.07, vl err: 0.07
time elapsed for 200 steps: 1.233,
('Sample mini-batch results: \npredicted string: ', array(['I', "'", 'M', ' ', 'L', 'O', 'K', 'I', 'N', 'G', '
', 'F', 'O',
    'R', '', 'P', 'U', 'B', '', 'F', 'O', 'D', '', 'R', 'E', 'S',
    'T', 'A', 'U', 'R', 'A', 'N', 'T', ' ', 'A', 'N', 'D', ' ', 'I',
    'T', ' ', 'S', 'H', 'O', 'U', 'L', 'D', ' ', 'B', 'E', ' ', 'I',
    'N', ' ', 'T', 'H', 'E', ' ', 'U', 'L', 'D', 'Y', ' ', 'C', 'E',
    'N', 'T', 'E', 'R', ' ', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
('actual string1: ', array(['I', "'", 'M', '', 'L', 'O', 'O', 'K', 'I', 'N', 'G', ' ', 'F',
    'O', 'R', ' ', 'A', ' ', 'M', 'E', 'D', 'I', 'T', 'E', 'R', 'R',
    'A', 'N', 'E', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R',
    'A', 'N', 'T'],
   dtype='|S1'))
epoch 121, step: 0, tr_loss: 164.90, vl_loss: 153.62, tr_err: 0.07, vl_err: 0.07
epoch 122, step: 0, tr loss: 163.59, vl loss: 152.39, tr err: 0.07, vl err: 0.07
epoch 123, step: 0, tr_loss: 162.29, vl_loss: 151.19, tr_err: 0.07, vl_err: 0.07
epoch 124, step: 0, tr_loss: 161.01, vl_loss: 150.00, tr_err: 0.07, vl_err: 0.07
epoch 125, step: 0, tr_loss: 159.75, vl_loss: 148.83, tr_err: 0.07, vl_err: 0.07
epoch 126, step: 0, tr loss: 158.52, vl loss: 147.68, tr err: 0.07, vl err: 0.07
epoch 127, step: 0, tr_loss: 157.30, vl_loss: 146.55, tr_err: 0.07, vl_err: 0.07
epoch 128, step: 0, tr loss: 156.11, vl loss: 145.44, tr err: 0.07, vl err: 0.07
epoch 129, step: 0, tr_loss: 154.93, vl_loss: 144.34, tr_err: 0.07, vl_err: 0.07
epoch 130, step: 0, tr loss: 153.76, vl loss: 143.26, tr err: 0.07, vl err: 0.07
time elapsed for 200 steps: 1.242,
('Sample mini-batch results: \npredicted string: ', array(['I', "'", 'M', ' ', 'L', 'O', 'K', 'I', 'N', 'G', '
', 'F', 'O',
    'R', '', 'A', 'N', '', 'E', 'X', 'P', 'E', 'N', 'S', 'I', 'V',
    'E', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A', 'N', 'T', ' ',
    dtype='|S1'))
('actual string1: ', array(['I', '', 'W', 'O', 'U', 'L', 'D', '', 'L', 'I', 'K', 'E', '',
```

```
'T', 'O', ' ', 'F', 'I', 'N', 'D', ' ', 'A', 'N', ' ', 'I', 'N',
    'D', 'I', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A',
    'N', 'T', ' ', 'A', 'N', 'D', ' ', 'I', 'T', ' ', 'S', 'H', 'O',
    'U', 'L', 'D', ' ', 'B', 'E', ' ', 'I', 'N', ' ', 'T', 'H', 'E',
    '', 'G', 'I', 'R', 'T', 'O', 'N', '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 131, step: 0, tr loss: 152.62, vl loss: 142.19, tr err: 0.07, vl err: 0.07
epoch 132, step: 0, tr loss: 151.49, vl loss: 141.14, tr err: 0.07, vl err: 0.07
epoch 133, step: 0, tr_loss: 150.37, vl_loss: 140.10, tr_err: 0.07, vl_err: 0.07
epoch 134, step: 0, tr loss: 149.28, vl loss: 139.08, tr err: 0.07, vl err: 0.07
epoch 135, step: 0, tr loss: 148.20, vl loss: 138.08, tr err: 0.07, vl err: 0.07
epoch 136, step: 0, tr loss: 147.13, vl loss: 137.09, tr err: 0.07, vl err: 0.07
epoch 137, step: 0, tr_loss: 146.08, vl_loss: 136.11, tr_err: 0.07, vl_err: 0.07
epoch 138, step: 0, tr_loss: 145.05, vl_loss: 135.15, tr_err: 0.07, vl_err: 0.07
epoch 139, step: 0, tr loss: 144.03, vl loss: 134.20, tr err: 0.07, vl err: 0.07
epoch 140, step: 0, tr loss: 143.02, vl loss: 133.26, tr err: 0.07, vl err: 0.07
time elapsed for 200 steps: 1.199,
('Sample mini-batch results: \npredicted string: ', array(['I', "'", 'M', ' ', 'L', 'O', 'K', 'I', 'N', 'G', '
', 'F', 'O',
    'R', '', 'A', 'N', '', 'E', 'X', 'P', 'E', 'N', 'S', 'I', 'V',
    'E', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A', 'N', 'T', ' ',
    dtype='|S1'))
('actual string1: ', array(['I', ' ', 'W', 'O', 'U', 'L', 'D', ' ', 'L', 'I', 'K', 'E', ' ',
    'T', 'O', ' ', 'F', 'I', 'N', 'D', ' ', 'A', 'N', ' ', 'I', 'N',
    'D', 'I', 'A', 'N', ' ', 'R', 'E', 'S', 'T', 'A', 'U', 'R', 'A',
    'N', 'T', '', 'A', 'N', 'D', '', 'I', 'T', '', 'S', 'H', 'O',
    "U',"L',"D',"',"B',"E',"',"I',"N',"',"T',"H',"E',\\
    '', 'G', 'I', 'R', 'T', 'O', 'N', '', 'A', 'R', 'E', 'A'],
   dtype='|S1'))
epoch 141, step: 0, tr loss: 142.03, vl loss: 132.34, tr err: 0.07, vl err: 0.07
epoch 142, step: 0, tr_loss: 141.05, vl_loss: 131.43, tr_err: 0.07, vl_err: 0.07
epoch 143, step: 0, tr loss: 140.09, vl loss: 130.53, tr err: 0.07, vl err: 0.07
epoch 144, step: 0, tr_loss: 139.13, vl_loss: 129.64, tr_err: 0.07, vl_err: 0.07
epoch 145, step: 0, tr loss: 138.19, vl loss: 128.77, tr err: 0.07, vl err: 0.07
epoch 146, step: 0, tr_loss: 137.27, vl_loss: 127.91, tr_err: 0.07, vl_err: 0.07
epoch 147, step: 0, tr loss: 136.35, vl loss: 127.05, tr err: 0.07, vl err: 0.07
epoch 148, step: 0, tr loss: 135.45, vl loss: 126.22, tr err: 0.07, vl err: 0.07
epoch 149, step: 0, tr loss: 134.56, vl loss: 125.39, tr err: 0.07, vl err: 0.07
epoch 150, step: 0, tr loss: 133.68, vl loss: 124.57, tr err: 0.07, vl err: 0.07
time elapsed for 200 steps: 1.209,
('Sample mini-batch results: \npredicted string: ', array(['L', 'O', 'K', 'I', 'N', 'G', ' ', 'F', 'O', 'R', '
', 'A', ' ',
```

```
'P', 'U', 'B', ' ', 'A', 'N', 'D', ' ', 'I', 'T', ' ', 'S', 'H',
'O', 'C', 'L', 'D', ' ', 'H', 'A', 'E', ' ', 'I', 'N', 'T', 'E',
'R', 'N', 'E', 'T', ' ', 'C', 'O', 'N', 'E', 'C', 'T', 'I', 'O',
'N', ' ', 'A', 'N', 'D', ' ', 'A', 'L', 'O', 'W', ' ', 'C', 'H',
'I', 'L', 'D', 'R', 'E', 'N', ' ', ' '],
dtype='|S1'))
('actual string1: ', array(['I', ' ', 'A', 'M', ' ', 'L', 'O', 'O', 'K', 'I', 'N', 'G', ' ',
'F', 'O', 'R', ' ', 'A', ' ', 'P', 'U', 'B', ' ', 'I', 'N', ' ',
'T', 'H', 'E', ' ', 'R', 'I', 'V', 'E', 'R', 'S', 'I', 'D', 'E',
' ', 'A', 'R', 'E', 'A'],
dtype='|S1'))
```

## Finished

Process finished with exit code 0