

```

✓ 3s [1] from tensorflow.keras.preprocessing.text import one_hot

✓ 0s [2] sent = ['the glass of milk',
              'the glass of juice',
              'the cup of tea',
              'I am a good boy',
              'I am a good developer',
              'understand the meaning of words',
              'your videos are good',]

✓ 0s [3] voc_size = 10000

✓ 0s [4] onehot_repr = [one_hot(words, voc_size) for words in sent]
print(onehot_repr)

[[4748, 3962, 9988, 5670], [4748, 3962, 9988, 1154], [4748, 8342, 9988, 8610], [5601, 4558, 1271, 6251, 4522], [5601, 4558, 1271, 6251, 4898], [3004, 4748, 2996, 9988, 9009], [5901,
4
[5] from tensorflow.keras.layers import Embedding
from tensorflow.keras.preprocessing.sequence import pad_sequences
import numpy as np
from tensorflow.keras.models import Sequential

✓ 0s [6] sent_length = 8
embedded_docs = pad_sequences(onehot_repr, padding='pre', maxlen=sent_length)
print(embedded_docs)

[[ [ 0 0 0 0 4748 3962 9988 5670]
 [ 0 0 0 0 4748 3962 9988 1154]
 [ 0 0 0 0 4748 8342 9988 8610]
 [ 0 0 0 5601 4558 1271 6251 4522]
 [ 0 0 0 5601 4558 1271 6251 4898]
 [ 0 0 0 3004 4748 2996 9988 9009]
 [ 0 0 0 0 5901 6815 5498 6251]]

✓ 0s [7] dim = 10

✓ 3s [8] model = Sequential()
model.add(Embedding(voc_size,10,input_length=sent_length))
model.compile('adam','mse')

✓ 0s [9] model.summary()

Model: "sequential"

```

Layer (type)	Output Shape	Param #
embedding (Embedding)	(None, 8, 10)	100000

```

=====
Total params: 100000 (390.62 KB)
Trainable params: 100000 (390.62 KB)
Non-trainable params: 0 (0.00 Byte)
=====

```

```
✓ [10] embedded_docs[0]
0s # not necessary

array([ 0, 0, 0, 0, 4748, 3962, 9988, 5670], dtype=int32)
```

```
✓ [11] print(model.predict(embedded_docs)[0])
0s

1/1 [=====] - 0s 100ms/step
[[-0.03645328 -0.03588714 -0.03254348  0.04738593  0.04127771 -0.0227242
  0.00800159  0.04743553 -0.02446505 -0.01194596]
 [-0.03645328 -0.03588714 -0.03254348  0.04738593  0.04127771 -0.0227242
  0.00800159  0.04743553 -0.02446505 -0.01194596]
 [-0.03645328 -0.03588714 -0.03254348  0.04738593  0.04127771 -0.0227242
  0.00800159  0.04743553 -0.02446505 -0.01194596]
 [-0.03645328 -0.03588714 -0.03254348  0.04738593  0.04127771 -0.0227242
  0.00800159  0.04743553 -0.02446505 -0.01194596]
 [-0.0053143  0.03844595  0.01437834 -0.03392351 -0.03495402  0.01711196
  0.04941041  0.00630294 -0.03176035  0.03126905]
 [ 0.01352259  0.02376001  0.0181209  0.03204736 -0.00321209  0.03194078
 -0.0008535  0.04841569  0.01614643 -0.0058224 ]
 [ 0.01964257  0.02677443  0.04176204 -0.01391707  0.03429201  0.04456693
  0.01599077  0.01948948  0.02742874 -0.01298708]
 [ 0.02913551 -0.01219257 -0.01151789 -0.04067389 -0.02299651 -0.03879628
  0.04601191  0.00450988  0.03407672 -0.01671411]]
```

```
✓ [12] print(model.predict(embedded_docs))
0s

1/1 [=====] - 0s 17ms/step
[[[-3.64532843e-02 -3.58871445e-02 -3.25434804e-02  4.73859347e-02
  4.12777103e-02 -2.27242000e-02  8.00158828e-03  4.74355333e-02
 -2.44650487e-02 -1.19459629e-02]
 [-3.64532843e-02 -3.58871445e-02 -3.25434804e-02  4.73859347e-02
  4.12777103e-02 -2.27242000e-02  8.00158828e-03  4.74355333e-02
 -2.44650487e-02 -1.19459629e-02]
 [-3.64532843e-02 -3.58871445e-02 -3.25434804e-02  4.73859347e-02
  4.12777103e-02 -2.27242000e-02  8.00158828e-03  4.74355333e-02
 -2.44650487e-02 -1.19459629e-02]
 [-3.64532843e-02 -3.58871445e-02 -3.25434804e-02  4.73859347e-02
  4.12777103e-02 -2.27242000e-02  8.00158828e-03  4.74355333e-02
 -2.44650487e-02 -1.19459629e-02]
 [-5.31430170e-03  3.84459533e-02  1.43783428e-02 -3.39235067e-02
 -3.49540226e-02  1.71119608e-02  4.94104065e-02  6.30294159e-03
 -3.17603499e-02  3.12690474e-02]
 [ 1.35225914e-02  2.37600096e-02  1.81208961e-02  3.20473574e-02
 -3.21209431e-03  3.19407843e-02 -8.53501260e-04  4.84156869e-02
 1.61464252e-02 -5.82239777e-03]
 [ 1.96425654e-02  2.67744325e-02  4.17620428e-02 -1.39170662e-02
 3.42920087e-02  4.45669331e-02  1.59907676e-02  1.94894783e-02
 2.74287350e-02 -1.29870772e-02]
 [ 2.91355141e-02 -1.21925697e-02 -1.15178935e-02 -4.06738892e-02
 -2.29965094e-02 -3.87962833e-02  4.60119136e-02  4.50987741e-03
 3.40767242e-02 -1.67141072e-02]]

[[-3.64532843e-02 -3.58871445e-02 -3.25434804e-02  4.73859347e-02
  4.12777103e-02 -2.27242000e-02  8.00158828e-03  4.74355333e-02
 -2.44650487e-02 -1.19459629e-02]
 [-3.64532843e-02 -3.58871445e-02 -3.25434804e-02  4.73859347e-02
  4.12777103e-02 -2.27242000e-02  8.00158828e-03  4.74355333e-02
 -2.44650487e-02 -1.19459629e-02]
 [-3.64532843e-02 -3.58871445e-02 -3.25434804e-02  4.73859347e-02
  4.12777103e-02 -2.27242000e-02  8.00158828e-03  4.74355333e-02
 -2.44650487e-02 -1.19459629e-02]
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0s



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[ -3.64532843e-02 -3.58871445e-02 -3.25434804e-02 4.73859347e-02
4.12777103e-02 -2.27242000e-02 8.00158828e-03 4.74355333e-02
-2.44650487e-02 -1.19459629e-02 ]
[ -5.31430170e-03 3.84459533e-02 1.43783428e-02 -3.39235067e-02
-3.49540226e-02 1.71119608e-02 4.94104065e-02 6.30294159e-03
-3.17603499e-02 3.12690474e-02 ]
[ 1.35225914e-02 2.37600096e-02 1.81208961e-02 3.20473574e-02
-3.21209431e-03 3.19407843e-02 -8.53501260e-04 4.84156869e-02
1.61464252e-02 -5.82239777e-03 ]
[ 1.96425654e-02 2.67744325e-02 4.17620428e-02 -1.39170662e-02
3.42920087e-02 4.45669331e-02 1.59907676e-02 1.94894783e-02
2.74287350e-02 -1.29870772e-02 ]
[ -3.52245197e-02 2.13944204e-02 -4.85589504e-02 3.03208344e-02
-2.21924074e-02 -9.18962061e-04 3.77181917e-03 -1.44675598e-02
3.66915353e-02 -8.28363746e-03 ] ]

[ [ -3.64532843e-02 -3.58871445e-02 -3.25434804e-02 4.73859347e-02
4.12777103e-02 -2.27242000e-02 8.00158828e-03 4.74355333e-02
-2.44650487e-02 -1.19459629e-02 ]
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[ -5.31430170e-03 3.84459533e-02 1.43783428e-02 -3.39235067e-02
-3.49540226e-02 1.71119608e-02 4.94104065e-02 6.30294159e-03
-3.17603499e-02 3.12690474e-02 ]
[ -2.61180997e-02 3.66371311e-02 8.04268196e-03 1.15518086e-02
5.37312031e-03 -1.03187785e-02 3.79518159e-02 1.95472278e-02
1.93896331e-02 -6.02589920e-03 ]
[ 1.96425654e-02 2.67744325e-02 4.17620428e-02 -1.39170662e-02
3.42920087e-02 4.45669331e-02 1.59907676e-02 1.94894783e-02
2.74287350e-02 -1.29870772e-02 ] ]
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0s



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[ 2.91612186e-02 -5.57720661e-03 2.28314735e-02 -2.02647336e-02
-5.62783331e-03 1.39276721e-02 2.63752453e-02 3.62104289e-02
1.44506618e-03 4.56111766e-02 ] ]

[ [ -3.64532843e-02 -3.58871445e-02 -3.25434804e-02 4.73859347e-02
4.12777103e-02 -2.27242000e-02 8.00158828e-03 4.74355333e-02
-2.44650487e-02 -1.19459629e-02 ]
[ -3.64532843e-02 -3.58871445e-02 -3.25434804e-02 4.73859347e-02
4.12777103e-02 -2.27242000e-02 8.00158828e-03 4.74355333e-02
-2.44650487e-02 -1.19459629e-02 ]
[ -3.64532843e-02 -3.58871445e-02 -3.25434804e-02 4.73859347e-02
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-2.44650487e-02 -1.19459629e-02 ]
[ -6.67982176e-03 -1.52723417e-02 2.49555148e-02 -2.14499366e-02
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-1.21477619e-02 3.39089520e-02 ]
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[ [ -3.64532843e-02 -3.58871445e-02 -3.25434804e-02 4.73859347e-02
4.12777103e-02 -2.27242000e-02 8.00158828e-03 4.74355333e-02
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0s



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[ -6.67982176e-03 -1.52723417e-02 2.49555148e-02 -2.14499366e-02
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-1.21477619e-02 3.39089520e-02]
[ 3.50734852e-02 4.12035473e-02 -3.51118557e-02 2.11167000e-02
 1.28211118e-02 2.64518149e-02 -4.99997139e-02 1.53730623e-02
-4.23367620e-02 -1.42524391e-03]
[ -3.53622660e-02 -4.75855917e-03 1.63038857e-02 4.36578058e-02
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-1.35572441e-02 3.60404141e-02]
[ -1.13494173e-02 1.97735541e-02 1.48200653e-02 1.70312859e-02
-4.37198766e-02 3.23232524e-02 -4.77023832e-02 4.86302488e-02
-7.91490078e-04 4.68505509e-02]
[ 2.89269574e-02 4.05540802e-02 2.83200257e-02 3.01015265e-02
 3.69067900e-02 -2.62771975e-02 -5.38278744e-03 2.72169374e-02
 2.86462046e-02 -1.60875171e-03]]
```

```
[ [ -3.64532843e-02 -3.58871445e-02 -3.25434804e-02 4.73859347e-02
 4.12777103e-02 -2.27242000e-02 8.00158828e-03 4.74355333e-02
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-2.44650487e-02 -1.19459629e-02]
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-7.84076378e-03 -4.47691567e-02]
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-3.49540226e-02 1.71119608e-02 4.94104065e-02 6.30294159e-03
-3.17603499e-02 3.12690474e-02]
[ -2.65795719e-02 -4.57710288e-02 -3.59762311e-02 7.88103789e-04
-4.31184657e-02 -2.26715691e-02 3.35920341e-02 1.70136131e-02
 2.81871893e-02 2.49271132e-02]
[ 1.96425654e-02 2.67744325e-02 4.17620428e-02 -1.39170662e-02
 3.42920087e-02 4.45669331e-02 1.59907676e-02 1.94894783e-02
 2.74287350e-02 -1.29870772e-02]
```

0s



```
[ 1.57625601e-03 -1.88696031e-02 -3.27010639e-02 -2.86690351e-02
-1.20918863e-02 3.91916744e-02 2.02692859e-02 4.87731434e-02
 3.05652618e-03 -1.89886577e-02]]

[ [ -3.64532843e-02 -3.58871445e-02 -3.25434804e-02 4.73859347e-02
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-2.44650487e-02 -1.19459629e-02]
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 4.12777103e-02 -2.27242000e-02 8.00158828e-03 4.74355333e-02
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-2.44650487e-02 -1.19459629e-02]
[ 3.23364772e-02 -2.74564382e-02 -4.50883508e-02 -1.47413500e-02
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-4.37198766e-02 3.23232524e-02 -4.77023832e-02 4.86302488e-02
-7.91490078e-04 4.68505509e-02]]]
```