
tensorflow-learning-note

Documentation

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1.1

1.1.1 softmax

softmax0-1

$$S(y_i) = \frac{e^{y_i}}{\sum_j e^{y_j}}$$

```
def softmax(x):  
    return np.exp(x) / np.sum(np.exp(x), axis=0)
```

1.1.2 cross-entropy

$$(D(S, L) = -\sum_j L_i \log(S_i))$$

1.1.3

1.1.4 IPython.display

<https://stackoverflow.com/questions/11854847/how-can-i-display-an-image-from-a-file-in-jupyter-notebook>

CHAPTER 2

- -
 - GPU

2.1

```
# Creates a graph.
with tf.device('/cpu:0'):
    a = tf.constant([1.0, 2.0, 3.0, 4.0, 5.0, 6.0], shape=[2, 3], name='a')
    b = tf.constant([1.0, 2.0, 3.0, 4.0, 5.0, 6.0], shape=[3, 2], name='b')
c = tf.matmul(a, b)
# Creates a session with log_device_placement set to True.
sess = tf.Session(config=tf.ConfigProto(log_device_placement=True))
# Runs the op.
print(sess.run(c))
```

2.2 GPU

gpu

```
config = tf.ConfigProto()
config.gpu_options.allow_growth = True
session = tf.Session(config=config)
```

GPU

- *LSTM*
 - *github tutorial learn*

LSTM keras

3.1 github tutorial learn

4.1 Tensor Tensor() is not an element of this graph.

I had this problem when doing inference in a different thread than where I loaded my model. Here's how I fixed the problem:

Right after loading or constructing your model, save the TensorFlow graph:

```
graph = tf.get_default_graph()
```

In the other thread (or perhaps in an asynchronous event handler), do:

```
global graph
with graph.as_default():
    (... do inference here ...)
```

I learned about this from https://www.tensorflow.org/versions/r0.11/api_docs/python/framework.html#get_default_graph

CHAPTER 5

Indices and tables

- `genindex`
- `modindex`
- `search`