

TensorFlow Tutorial

Lesson 3

- Tensor-Board

Tensor-Board

- For Visualization of the computation the Tensor-Board can be used
 - Python-Application needs to write specified data into a log file
 - Data can be evaluated in a web-browser (Chrome, Firefox etc.)

Tensorflow FileWriter

- To write to the log file use „*tf.summary.FileWriter*“
 - *wr = tf.summary.FileWriter('./simpleExample',session.graph)*
- Where the first argument describes the location to write the log file to
- Second argument describes, what will be written to the log file

Tensorflow Code with FileWriter

```
##Imports the Tensorflow library
import tensorflow as tf

#Define the constant, with a value, datatype, and a representative name
nc1 = tf.constant(10,tf.float32,name='const1')
nc2 = tf.constant(11,tf.float32,name='const2')

#Define the place holder x
x = tf.placeholder(tf.float32,name='x')

#Define the variable y
y = tf.Variable(5.0,tf.float32,name='y')

#Describe the subtraction
ns = x - y;

#Describe the addition
na = tf.add(nc1,nc2)

#Describe the division
nd = tf.divide(na,ns)

#Create the Session object
with tf.Session() as session:

    #Create log file
    wr = tf.summary.FileWriter('./simpleExample',session.graph)
    #Initialize variables
    init = tf.global_variables_initializer()
    #parse to session
    session.run(init) print(session.run(nd,{x:7.0}))
```

- To start the TensorBoard, one has to execute the command:

tensorboard --logdir="./simpleExample",

- To access the board, if it was executed on your machine type into webbrowser:

localhost:6006

→ If it was on a remote machine, substitute localhost with the ip of the remost machine