```
summaryUsage.py
```

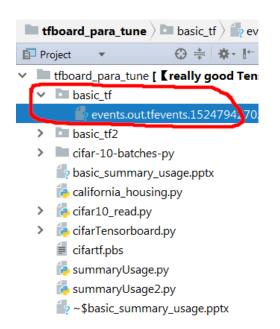
```
import tensorflow as tf
x = tf. Variable(1, 0)
xnew = tf.assign(x, x+0.2)
x summary = tf. summary. scalar('x trace', xnew)
writer= tf. summary. FileWriter('basic_tf', graph=tf. get default graph())
with tf. Session() as sess:
    sess.run(tf.global_variables_initializer())
    for i in range (20):
        , x smy = sess.run([xnew, x summary])
        writer. add summary (x smy, global step=i)
writer.close()
```



(tensorflow) J:\code\alltype\_code\pythonCode\tfboard\_para\_tune>python summaryUsage.py

 $(tensorflow) \ \ J:\\ code\\ all type\_code\\ pythonCode\\ tfboard\_para\_tune\\ tensorboard --log dir=basic\_tf$ 

TensorBoard 1.7.0 at http://PC201608291710:6006 (Press CTRL+C to quit)



```
summaryUsage.py
                                                                                                   TensorBoard
                                                                                                                          GRAPHS
                                                                                                                   SCALARS
import tensorflow as tf
                                                                                                                           Q Filter tags (regular expressions supported)
                                                                                                   Show data download links
                                                                                                   Ignore outliers in chart scaling
                                                                                                                            x_trace
                                                                                                                default
                                                                                                   Tooltip sorting
x = tf. Variable(1.0)
                                                                                                    method:
                                                                                                                             x_trace
xnew = tf.assign(x, x+0.2)
                                                                                                    Smoothing
                                                                                                                                 4.00
x summary = tf. summary. scalar('x trace', xnew)
                                                                                                                                 3.00
                                                                                                                                 2.00
writer= tf. summary. FileWriter('basic_tf', graph=tf.get_default_graph()) Horizontal Axis
                                                                                                                                 1.00
                                                                                                           RELATIVE WALL
                                                                                                                                 0.00
with tf. Session() as sess:
                                                                                                                                     0.000 4.000 8.000 12.00 16.00
                                                                                                    Runs
                                                                                                                             E3 🗮 🖸
      sess.run(tf.global_variables_initializer())
                                                                                                    Write a regex to filter runs
     for i in range (20):
                                                                                                    ✓ ○ .
                                                                                                                                             2.800 8.000 Fri Apr 27, 09:57:51 Os
           , x smy = sess.run([xnew, x summary])
           writer. add summary (x smy, global step=i)
                                                                                                   TensorBoard
                                                                                                                        SCALARS
                                                                                                                                 GRAPHS
writer.close()
                                                                                                          Fit to screen
                                                                                                          Download PNG
                                                                                                                                      Assign
                                                                                                    Run
                                                                                                                                                x_trace
                                                                                                    (1)
                                                                                                    Session
                                                                                                                                                               add
                                                                                                    runs (0)
                                                                                                    Upload
                                                                                                              Choose File
                                                                                                     Trace inputs
                                                                                                    Color 

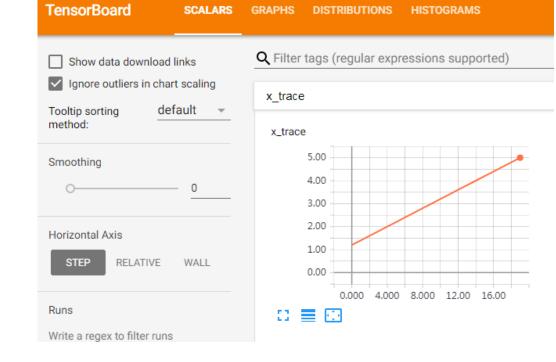
Structure
                                                                                                                                             Variable
                                                                                                            Device
                                                                                                          XLA Cluster
```

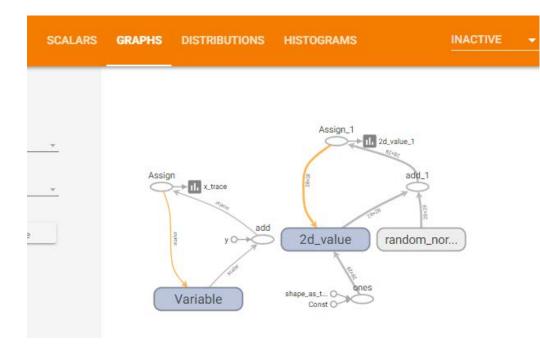
```
summaryUsage2.py
import tensorflow as tf
x = tf. Variable(1.0)
xnew = tf. assign(x, x+0.2)
x summary = tf. summary. scalar('x trace', xnew)
y = tf. Variable(tf. ones([28, 28]), name='2d value')
ynew = tf.assign(y, tf.add(y, tf.random normal([28, 28])))
y summary = tf. summary. histogram ('2d value', ynew)
merged summary = tf. summary.merge all()
writer=
tf. summary. FileWriter ('basic tf2', graph=tf. get default graph())
with tf. Session() as sess:
     sess.run(tf.global_variables_initializer())
    for i in range (20):
         __, merged_smy = sess.run([xnew, merged_summary])
         writer. add summary (merged smy, global step=i)
writer.close()
(tensorflow) J:\code\alltype_code\pythonCode\tfboard_para_tune>python summaryUsage2.py
(tensorflow) J:\code\alltype code\pythonCode\tfboard para tune>tensorboard --logdir=basic tf2
```

TensorBoard 1.7.0 at http://PC201608291710:6006 (Press CTRL+C to quit)

summaryUsage2.py

```
import tensorflow as tf
x = tf. Variable(1.0)
xnew = tf.assign(x, x+0.2)
x summary = tf. summary. scalar('x trace', xnew)
y = tf. Variable(tf. ones([28, 28]), name='2d value')
ynew = tf.assign(y, tf.add(y, tf.random normal([28, 28])))
y summary = tf. summary. histogram ('2d value', ynew)
merged summary = tf. summary.merge all()
writer=
tf. summary. FileWriter ('basic tf2', graph=tf. get default graph())
with tf. Session() as sess:
    sess.run(tf.global variables initializer())
    for i in range (20):
        __, merged_smy = sess.run([xnew, merged_summary])
        writer. add summary (merged smy, global step=i)
writer.close()
```





```
summaryUsage2.py
import tensorflow as tf
x = tf. Variable(1.0)
xnew = tf.assign(x, x+0.2)
x summary = tf. summary. scalar('x trace', xnew)
y = tf. Variable(tf. ones([28, 28]), name='2d value')
ynew = tf.assign(y, tf.add(y, tf.random normal([28, 28])))
y summary = tf. summary. histogram ('2d value', ynew)
merged summary = tf. summary.merge all()
writer=
tf. summary. FileWriter('basic_tf2', graph=tf.get_default_graph())
with tf. Session() as sess:
    sess.run(tf.global variables initializer())
    for i in range (20):
        __, merged_smy = sess.run([xnew, merged_summary])
        writer. add summary (merged smy, global step=i)
```

writer.close()

从从上到下的折现分别表示权重分布的不同分位数: [maximum, 93%, 84%, 69%, 50%, 31%, 16%, 7%, minimum]

