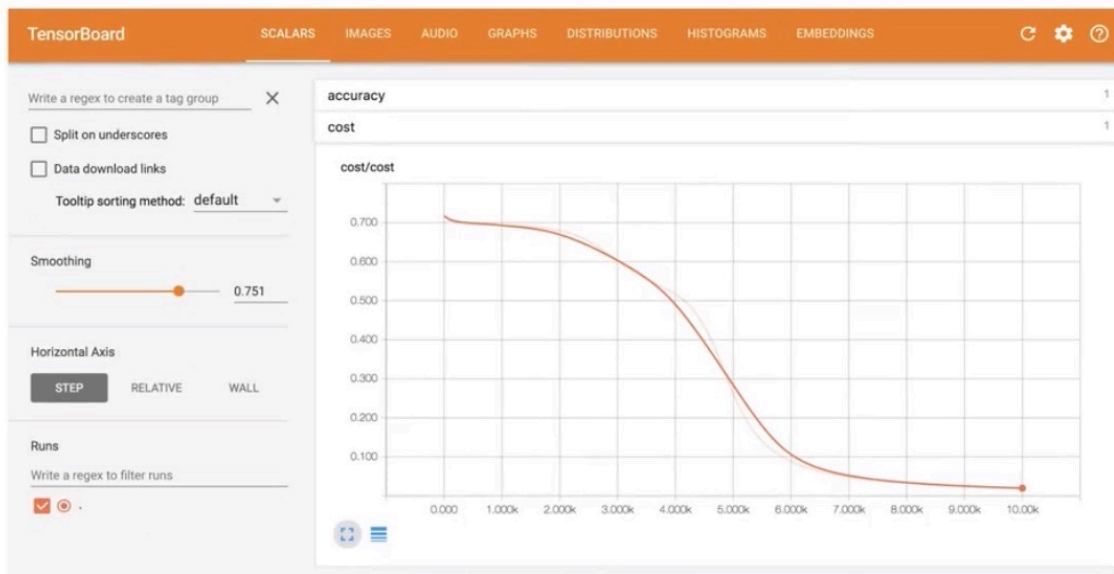


New way!



< 위와 같은 그래프 형태로 만들기 위한 5단계 >

- 1 From TF graph, decide which tensors you want to log : 어떤 텐서로 logging 할 것인지 정함
`w2_hist = tf.summary.histogram("weights2", W2)`
`cost_summ = tf.summary.scalar("cost", cost)`
- 2 Merge all summaries → 로깅한 내용을 일일이 작성하지 않고 merge 해줌
`summary = tf.summary.merge_all()`
- 3 Create writer and add graph
`# Create summary writer`
`writer = tf.summary.FileWriter('./logs')` → 위치를 정함
`writer.add_graph(sess.graph)` → 세션에 그래프를 넣어줌

summary를 어디에 저장할 것인지 파일의
- 4 Run summary merge and add_summary → summary 실행
`s, _ = sess.run([summary, optimizer], feed_dict=feed_dict)`
`writer.add_summary(s, global_step=global_step)` → summary에 데이터가 필요할 경우, feed_dict로 넘겨줌
- 5 Launch TensorBoard
`tensorboard --logdir=./logs` → 터미널에 입력

5 steps of using TensorBoard

```

# Lab 9 XOR
import datetime
import numpy as np
import os
import tensorflow as tf

x_data = np.array([[0, 0], [0, 1], [1, 0], [1, 1]], dtype=np.float32)
y_data = np.array([[0], [1], [1], [0]], dtype=np.float32)

tf.model = tf.keras.Sequential()
tf.model.add(tf.keras.layers.Dense(units=2, input_dim=2))
tf.model.add(tf.keras.layers.Activation('sigmoid'))
tf.model.add(tf.keras.layers.Dense(units=1, input_dim=2))
tf.model.add(tf.keras.layers.Activation('sigmoid'))
tf.model.compile(loss='binary_crossentropy', optimizer=tf.optimizers.SGD(lr=0.1),
metrics=['accuracy'])
tf.model.summary()

# prepare callback
log_dir = os.path.join(".", "logs", "fit", datetime.datetime.now().strftime("%Y%m%d-%H%M%S"))
tensorboard_callback = tf.keras.callbacks.TensorBoard(log_dir=log_dir, histogram_freq=1)

# add callback param to fit()
history = tf.model.fit(x_data, y_data, epochs=10000, callbacks=[tensorboard_callback])

predictions = tf.model.predict(x_data)
print('Prediction: \n', predictions)

score = tf.model.evaluate(x_data, y_data)
print('Accuracy: ', score[1])

```

```

'''
at the end of the run, open terminal / command window
cd to the source directory
tensorboard --logdir logs/fit → 디렉토리
read more on tensorboard: https://www.tensorflow.org/tensorboard/get_started
'''

```

⑤

* 포트 포워딩 (port forwarding)

local > ssh -L local_port:127.0.0.1:remote_port username@server.com

local의 port 번호를
몇 번으로 할 것인지

remote 서버의
port 번호를 몇 번으로
할 것인지 ex) 6006

remote server name

Server > tensorboard --logdir=./logs/xor_logs

(You can navigate to http://127.0.0.1:7007)