question_4f

May 7, 2020

[ ]:
```
# Fetch batch function:

def fetch_batch(epoch, batch_index, batch_size):

    return X_batch, y_batch


# Set up computational graph:

import tensorflow as tf
reset_graph ()

n_epochs = 1000
learning_rate = 0.01

X = tf.constant(scaled_housing_data_plus_bias, dtype=tf.float32, name="X")
y = tf.constant(housing_data_target, dtype=tf.float32, name="y")

theta = tf.Variable(tf.random_uniform([n + 1, 1], -1.0, 1.0), name="theta")
y_pred = tf .matmul(X, theta , name="predictions")
error = y_pred - y
mse = tf.reduce_mean(tf.square(error), name="mse")
optimizer = tf.train.GradientDescentOptimizer(learning_rate)
training_op = optimizer.minimize(mse)


# Execute:

init = tf.global_variables_initializer()

with
tf.Session() as sess:
    sess.run(init)
    for epoch in range(n_epochs):
        if epoch % 100 == 0:
            print("Epoch", epoch, "MSE=", mse.eval()) sess.run(training_op)
    best_theta = theta.eval()
```