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CORRIGENDUM

# Detection of cognitive impairment using a machine-learning algorithm [Corrigendum]

Youn YC, Choi SH, Shin HW, et al. *Neuropsychiatr Dis Treat*. 2018;14:2939–2945.

On page 2944, under Supplementary materials section, the correct Table S2 should read as follows:

**Table S2** The TensorFlow code using CRE DOS data to predict CI

```
import numpy as np
import tensorflow as tf

# each set was developed to create feature (x_data) and outcome (y_data) variables
xy = np.loadtxt('CRCD_KDSQ_MMSE_train.txt', unpack=True, dtype='float32')
x_data = xy[0:-1]
y_data = xy[-1]

# model training with the training dataset
X = tf.placeholder(tf.float32)
Y= tf.placeholder(tf.float32)

W = tf.Variable(tf.random_uniform([1, len(x_data)], -1.0, 1.0))

h = tf.matmul(W, X)
hypothesis = tf.div(1., 1. + tf.exp(-h))

cost = -tf.reduce_mean(Y * tf.log(hypothesis) + (1 - Y) * tf.log(1 - hypothesis))

a = tf.Variable(0.15)
optimizer = tf.train.gradientDescentOptimizer(a)
train = optimizer.minimize(cost)

init = tf.initialize_all_variables()

sess = tf.Session()
sess.run(init)

for step in range(10501):
sess.run(train, feed_dict={X: x_data, Y: y_data})
if (step % 20) == 0:
print(step, sess.run(cost, feed_dict={X: x_data, Y: y_data}), sess.run(W))

# calculation of the accuracy with the test dataset
xy = np.loadtxt('CRCD_KDSQ_MMSE_test.txt', unpack=True, dtype='float32')
x_data = xy[0:-1]
y_data = xy[-1]

print (sess.run(hypothesis, feed_dict={X: x_data, Y: y_data}))
answer = tf.equal(tf.floor(hypothesis +0.4), Y) accuracy = tf.reduce_mean(tf.cast(answer, "float")) print ("Accuracy: ", accuracy.eval(session=sess, feed_dict={X: x_data, Y: y_data}))
sess.close()
```

**Abbreviations:** CI, cognitive impairment; CREDOS, Clinical Research Center for Dementia of South Korea.

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