$_o peration =$
$tf.add(var, 1) update_o peration =$
$tf.assign(var, add_o peration) with tf.Session() assess :$
$sess.run(tf.global_v ariables_i nitializer()) for_i nrange(3) :$
$sess.run(update_o peration) print(sess.run(var))$
$_v alue =$
$sess.run(z1, feed_d ict =$
$x1 : 1, y1 : 2) z1_v alue, z2_v alue =$
$sess.run([z1, z2], feed_d ict =$
$x1 : 1, y1 : 2, x2 : [[2], [2]], y2 : [[3, 3]]) print(z1_v alue) print(z2_v alue)$
$\bar{x}) / \sqrt{Var(x) + variable_{epsilon}}$
$x =$
$x \times$
$scale+$
$offset$
$\bar{x} =$
$\frac{1}{m} \Sigma_{i=1}^m x_i$
$\sigma^2 =$
$\frac{1}{m} \Sigma_{i=1}^m (x_i -$
$\bar{x})$
$_p atch =$
$mpatches.Patch(color ='$
$red', label ='$
$sigmoid') blue_p atch =$
$mpatches.Patch(color ='$
$blue', label ='$
$tanh') with tf.Session() assess :$
$[x, y1, y2] =$
$sess.run([x, y1, y2]) plt.plot(x, y1,' r', x, y2,' b') ax =$
$plt.gca() ax.annotate(r"$
$\frac{-2x}{1+e^{-x}}$
$sigmoid(x) =$
$\frac{1}{1+e^{-x}}$
$_f un.png activate fun$
$_p atch =$
$mpatches.Patch(color ='$
$blue', label ='$
$softplus') yellow_p atch =$
$mpatches.Patch(color ='$
$yellow', label ='$
$relu') with tf.Session() assess :$
$[x, y2, y3] =$
$sess.run([x, y2, y3]) plt.plot(x, y2,' b', x, y3,' y') ax =$
$plt.gca() plt.xlabel('x') ax.annotate(r"^x)$
$relu(x) =$
$max(x, 0)$
$_p atch, yellow_p atch]) plt.savefig('relu_s oftplus.png', dpi =$
$600)$
$_s oftplus.png$
$_s hape =$
$[1, 4]) print(sess.run(b)) c =$
$tf.nn.dropout(a, 0.5, noise_s hape =$
$[1, 1]) print(sess.run(c))$
$_d ata =$
$tf.Variable(tf.random_n ormal(shape =$
$[10, 9, 9, 3], mean =$
$0, stddev =$
$1), dtype =$
$tf.float32) kernel =$
$tf.Variable(tf.random_n ormal(shape =$
$[2, 2, 3, 2], mean =$
$0, stddev =$
$1, dtype =$
$tf.float32))$
$_d ata, kernel, strides =$
$[1, 1, 1, 1], padding ='$
$SAME') init =$
$tf.global_v ariables_i nitializer() with tf.Session() assess :$
$sess.run(init) print(sess.run(y).shape)$

①
②
③
④
⑤
⑥
⑦
⑧