**from** numpy **import** exp, array, random, dot  
training\_set\_inputs **=** array([[0, 0, 1], [1, 1, 1], [1, 0, 1], [0, 1, 1]])  
training\_set\_outputs **=** array([[0, 1, 1, 0]]).T  
random.seed(1)  
synaptic\_weights **=** 2 **\*** random.random((3, 1)) **-** 1  
**for** iteration **in** range(10000)**:** output **=** 1 **/** (1 **+** exp(**-**(dot(training\_set\_inputs, synaptic\_weights))))  
 synaptic\_weights **+=** dot(training\_set\_inputs.T, (training\_set\_outputs **-** output) **\*** output **\*** (1 **-** output))  
print (1 **/** (1 **+** exp(**-**(dot(array([1, 2, 0]), synaptic\_weights)))))