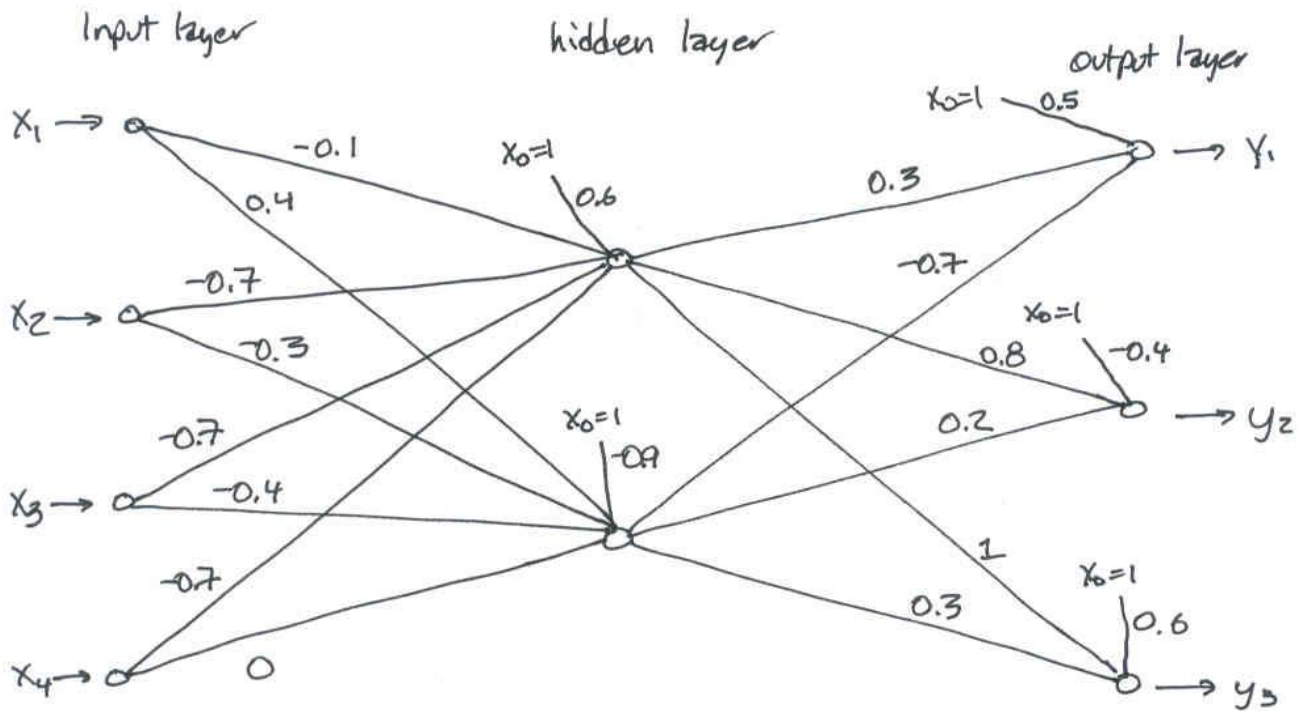


CSCI 4150 Intro to Artificial Intelligence, Fall 2004
 Neural Network backpropagation example

understand that this means the hidden and output units are sigmoid

Suppose we have the following neural network (of sigmoid units)



The current weights are shown on each connection.

Suppose we have the training example $\vec{x} = (1, 1, 0, 1)$ and $\vec{y} = (0, 1, 1)$

Do backpropagation to update the weights using this training example and $\alpha = 0.1$

Note that I have included the $x_0=1$ input to each sigmoid unit that turns the "threshold" into the weight for that input (so that the network can learn the threshold along with the other weights).