

Parker Skinner 1001541467  
CSE 4309-001  
10/13/2021

Task 1.

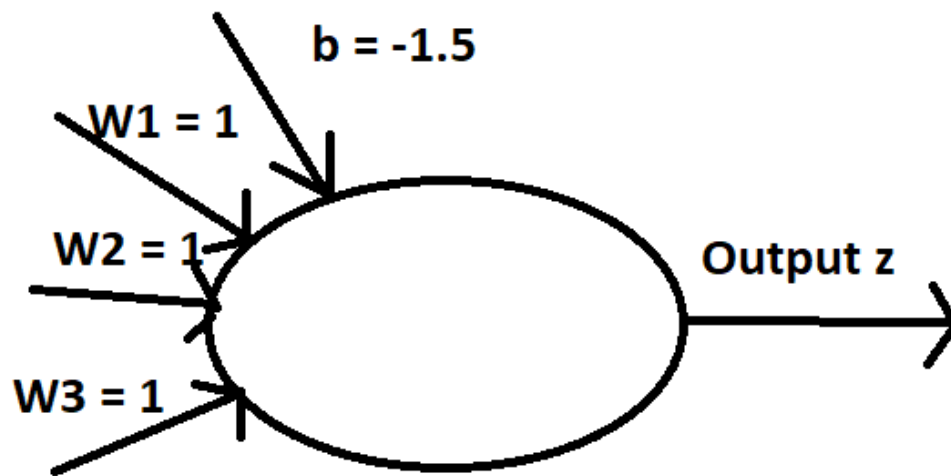
Training and testing on pendigits dataset, with 2 layers, 10 training rounds.

Output: classification accuracy=0.8656

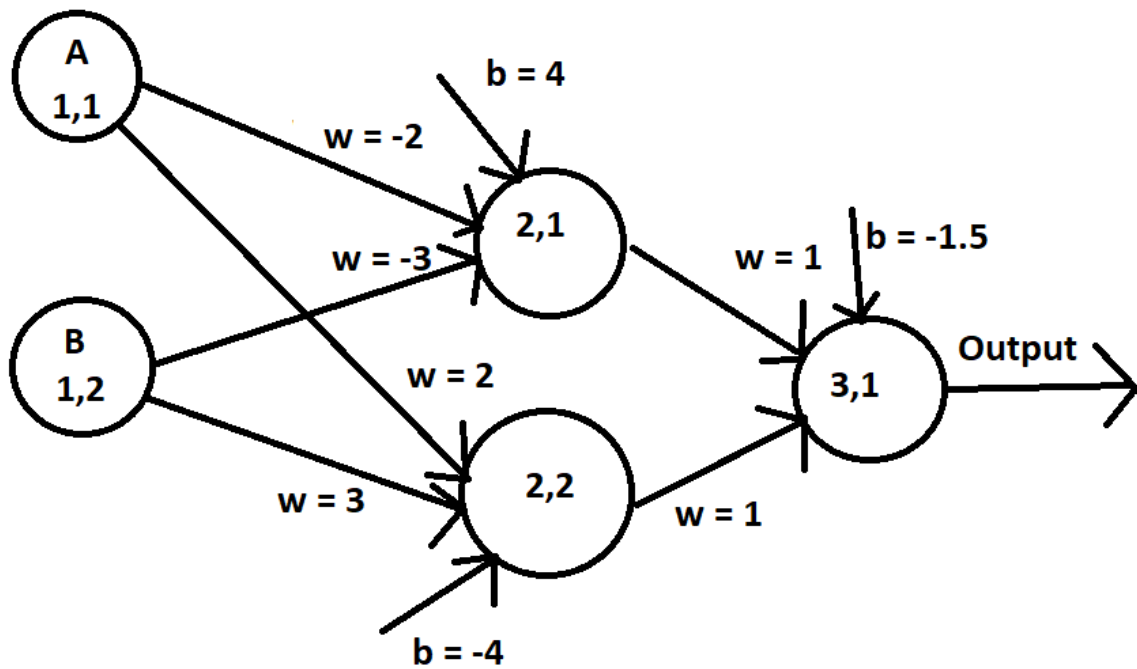
Training and testing on pendigits dataset, with 3 layers, 20 units per hidden layer, 20 training rounds.

Output: classification accuracy=0.8674

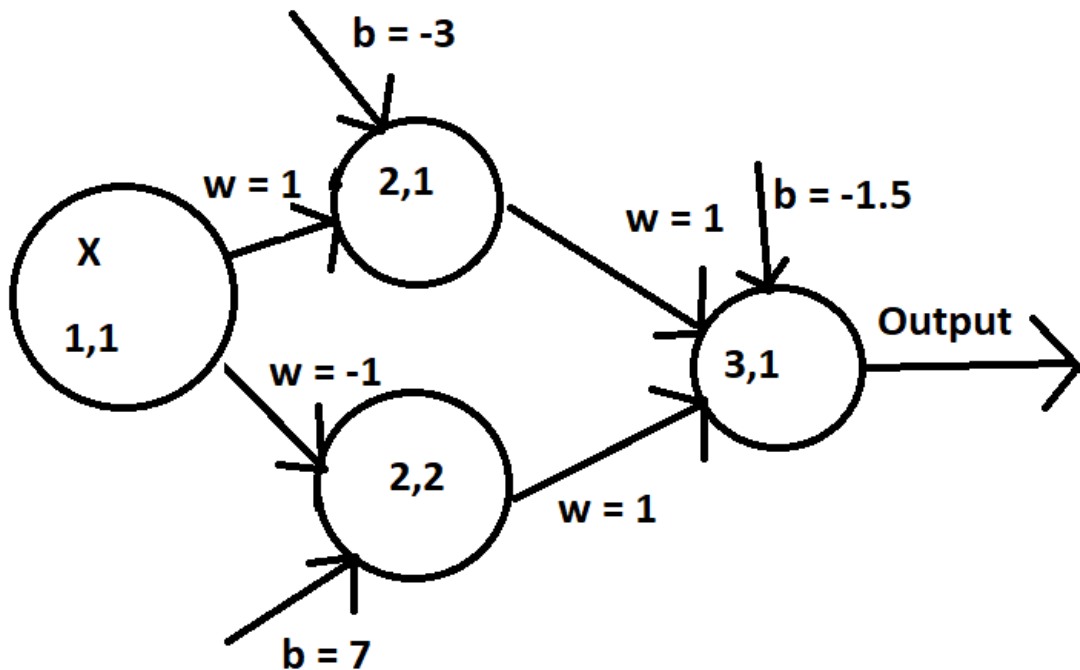
Task 2.



Task 3.



Task 4.



Task 5.

If all the weights were not randomized and instead set to zero, then the neural network would not have as good of a chance to find its desired value. The network could think its found

the global best value, when in fact it is only a local one and it will only ever find that local one since the weights all start at the same point and are not randomized