

Two layer neural network

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I consider trying to predict the output column gave the three input columns.

INPUT1---A	INPUT2---B	INPUT3---C	OUTPUT---O
0	0	0	0
0	0	1	0
0	1	1	1
0	1	0	0
1	1	0	1
1	1	1	1
1	0	1	1
1	0	0	0

This is a truth table, 3 inputs and one output, the logic expression is $O=AB+BC+AC$. And the function of this truth table is voting; the principle of voting is that the minority is subordinate to the majority.

For example, two of 3 people vote for someone, then the output equals to 1.

First, I code two layers of neural network and train this network.

Second, I test the neural network, the input is for example $[[1,0,1], [1,1,1], [1,0,0]]$

The output should be close to 1,1,0.