

Navjot Kaur (301404765)

Bonus Assignment

CMPT 310 (Artificial Intelligence Survey)

ANSWER 3

This assignment concerns with finding the number of hidden nodes using a single hidden layer with the help of k-fold cross validation technique. This pdf shows the example run output of the program in order to find the hidden nodes based on the least amount of error.

Example run of the program to determine optimal network structure:

<i>Size</i>	<i>Error</i>
1	0.39
2	0.38875000000000004
3	0.37875000000000003
4	0.36375
5	0.34750000000000003
6	0.30374999999999996
7	0.29874999999999996
8	0.20500000000000002
9	0.31625000000000003
10	0.26375000000000004
11	0.20375
12	0.20750000000000002
13	0.18875
14	0.19749999999999998
15	0.19374999999999998

As is evident from the above table, the least amount of error i.e., 0.18875 is when the number of hidden nodes is 13. So, according to the results of my experiment the optimal number of hidden nodes are 13.