

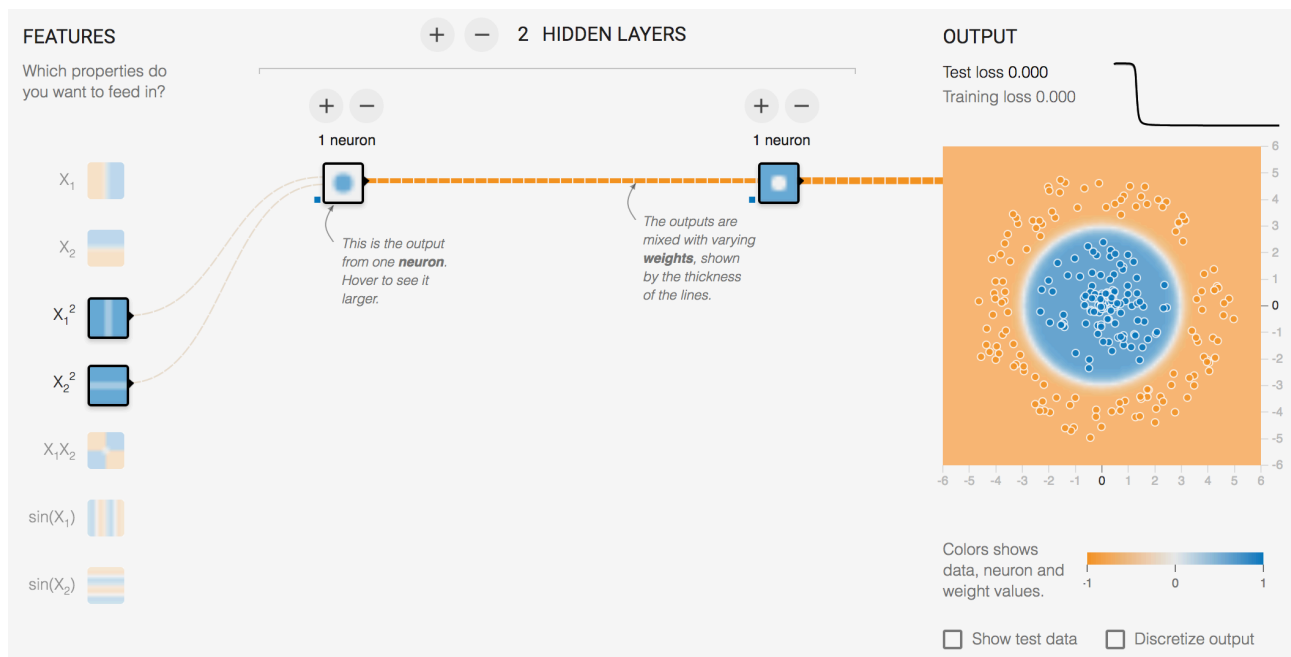
Machine Learning Exercise Report

ASSIGNMENT 09.1

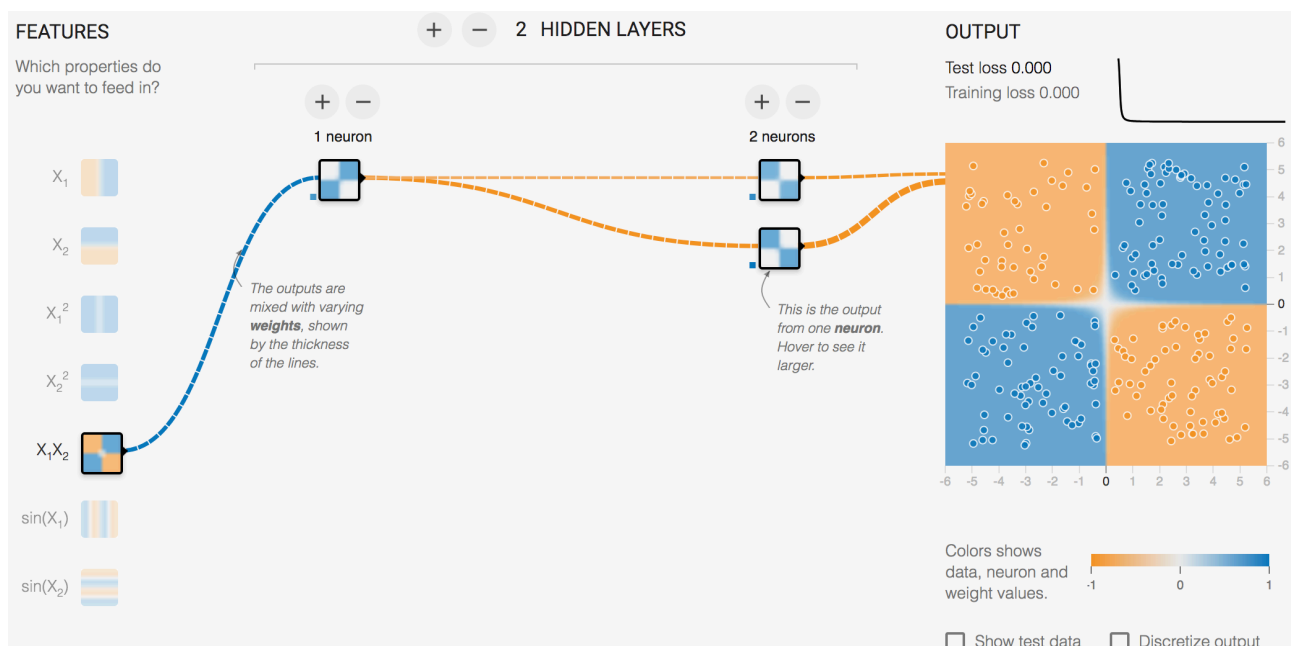
PART A - FIND DECENT NETWORK ARCHITECTURE

The following picture shows the results using a ReLu activation for the first three datasets and Tanh for the last. Network architecture is shown in the figures. The results hold true also after regenerating the data, however for dataset number 2 some values maybe right on the decision line.

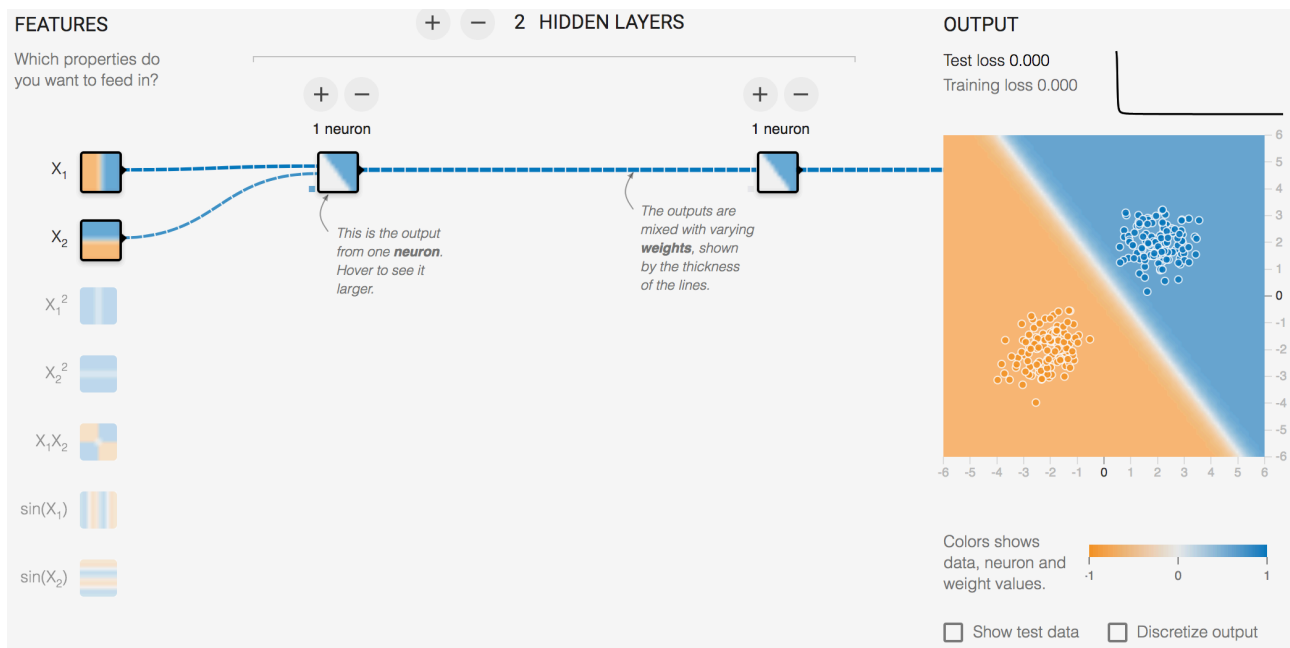
DATASET 1



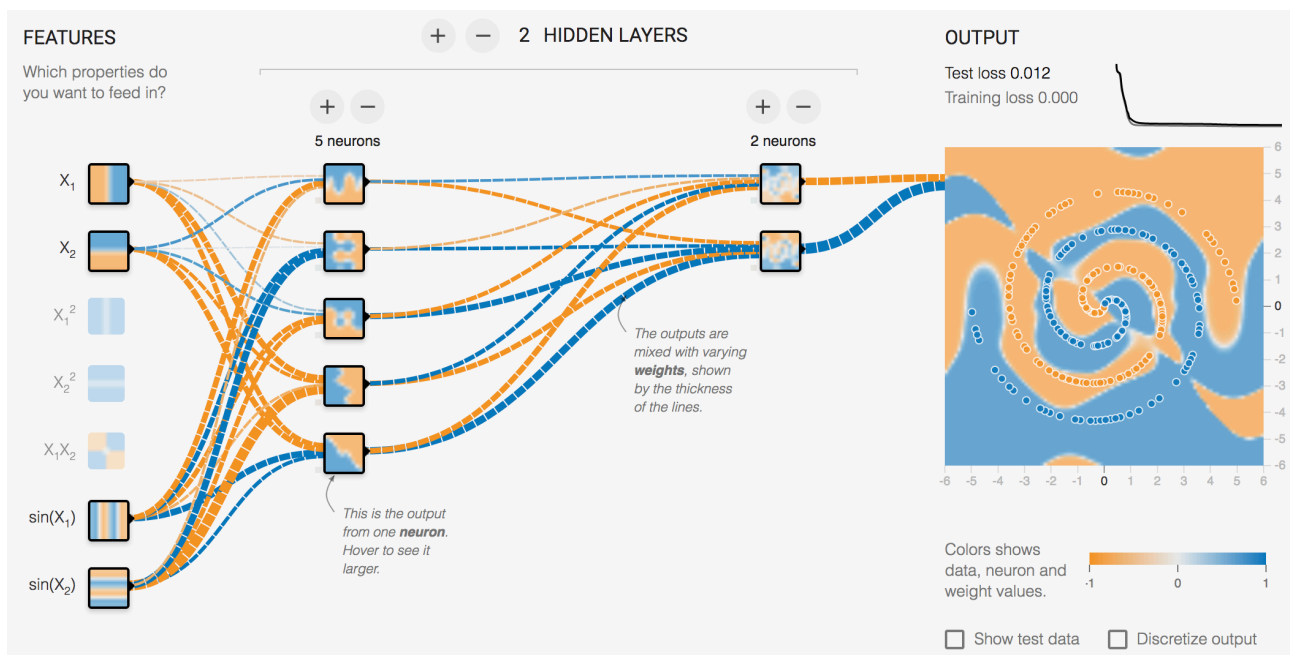
DATASET 2



DATASET 3



DATASET 4



PART B

If I keep the same network structure as before and use L2 regularisation with a rate of 0.003, then the results dataset are:

Dataset 1: Test loss = 0.052

Dataset 2: Test loss = 0.056

Dataset 3: Test loss = 0.034

Dataset 4: Test loss = 0.120