

Below are the plots of data set 1 and the corresponding decision boundaries with the labels of each data point determined by both neural networks that were designed. In Figure 2, the first neural network correctly determined the labels except for 3 points. Since could possibly be rectified by updating the weights in the output layer but it must be ensured that updating weights does not alter other labels. Similarly, in Figure 3, second neural network correctly determined the labels except for a few in one of the classes, which may be due to similar reasons as in the first neural network.

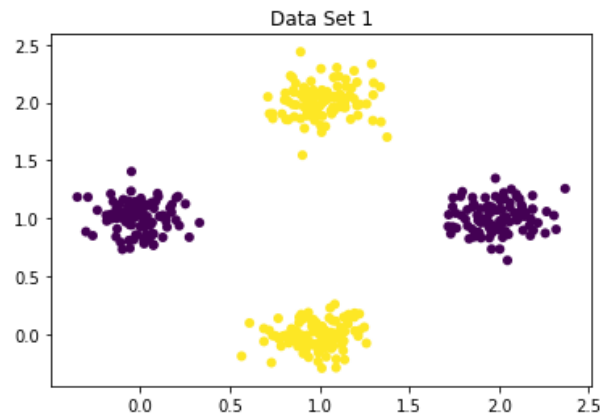


Figure 1 Data Set 1

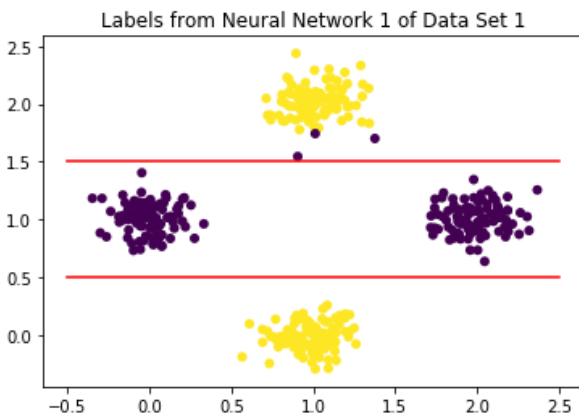


Figure 2 Labels determined from Neural Network 1

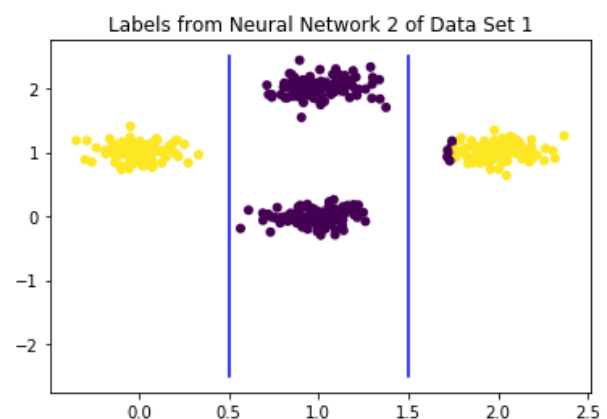


Figure 3 Labels determined from Neural Network 2

Below are the plots of data set 2 and the corresponding decision boundaries with the labels of each data point determined by both neural networks that were designed. In Figure 5, the first neural network correctly determined the labels except for 3 points. Since could possibly be rectified by updating the

weights in the output layer but it must be ensured that updating weights does not alter other labels. In Figure 6, second neural networks correctly determined all the labels.

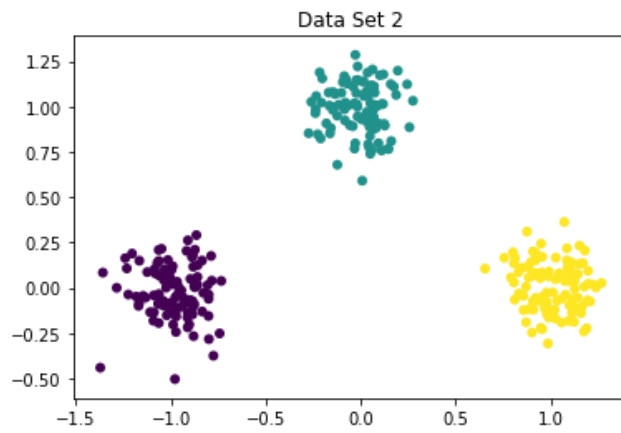


Figure 4 Data Set 2

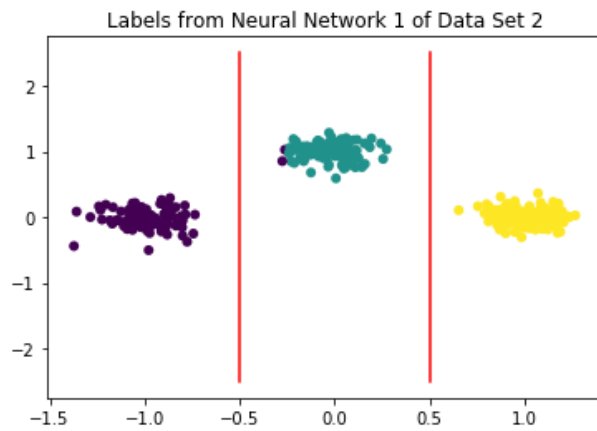


Figure 5 Labels determined from Neural Network 1

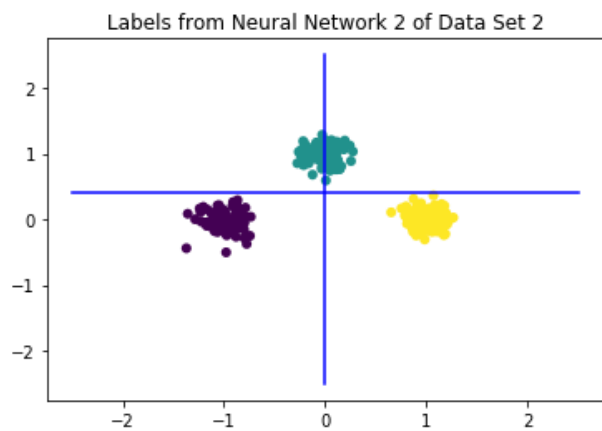


Figure 6 Labels determined from Neural Network 2

Below are the plots of data set 3 and the corresponding decision boundaries with the labels of each data point determined by both neural networks that were designed. In Figures 7 and 8, the first and second neural networks correctly determined all the labels.

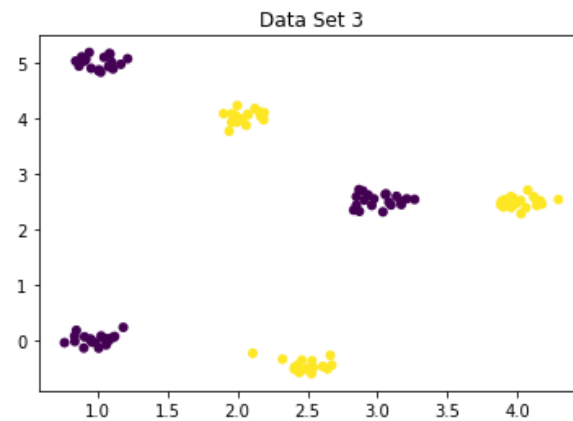


Figure 9 Data Set 3

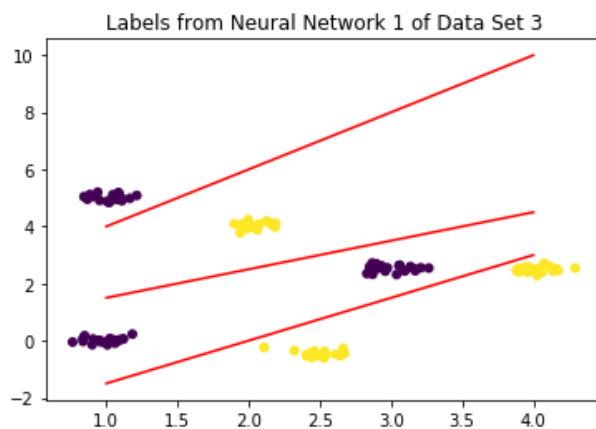


Figure 7 Labels determined from Neural Network 1

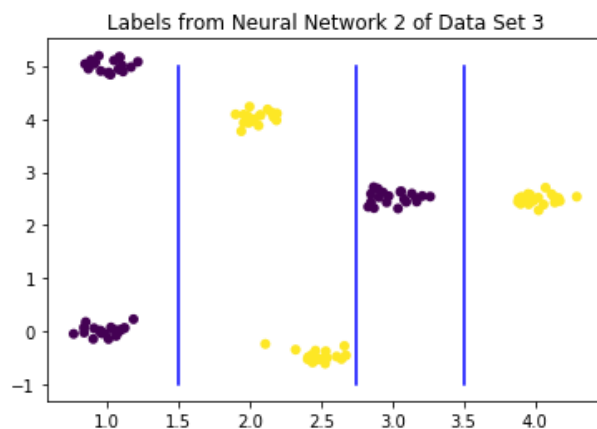


Figure 8 Labels determined from Neural Network 2