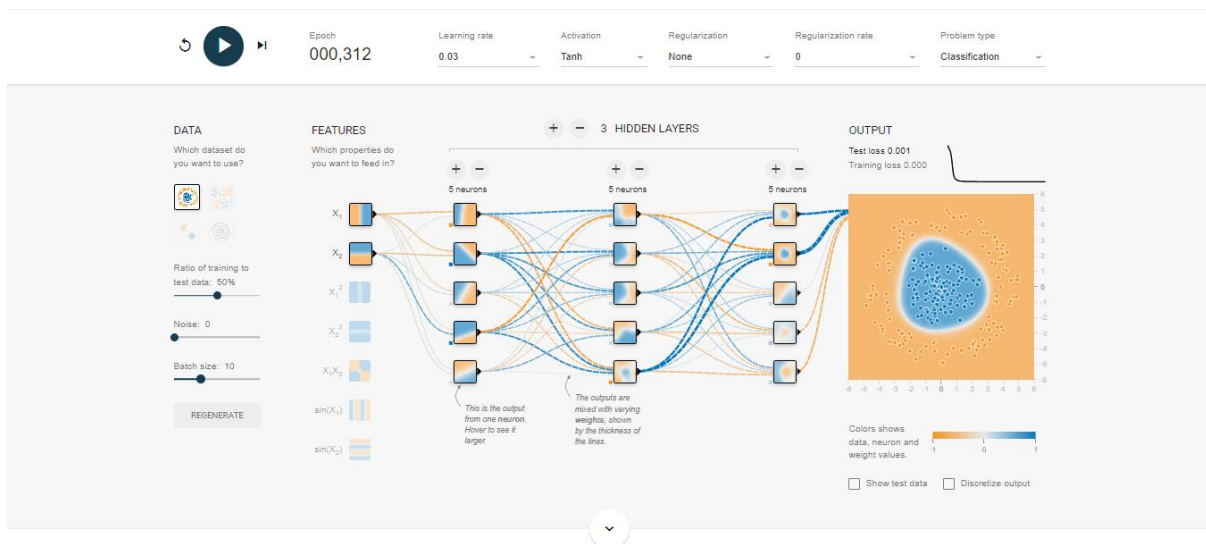


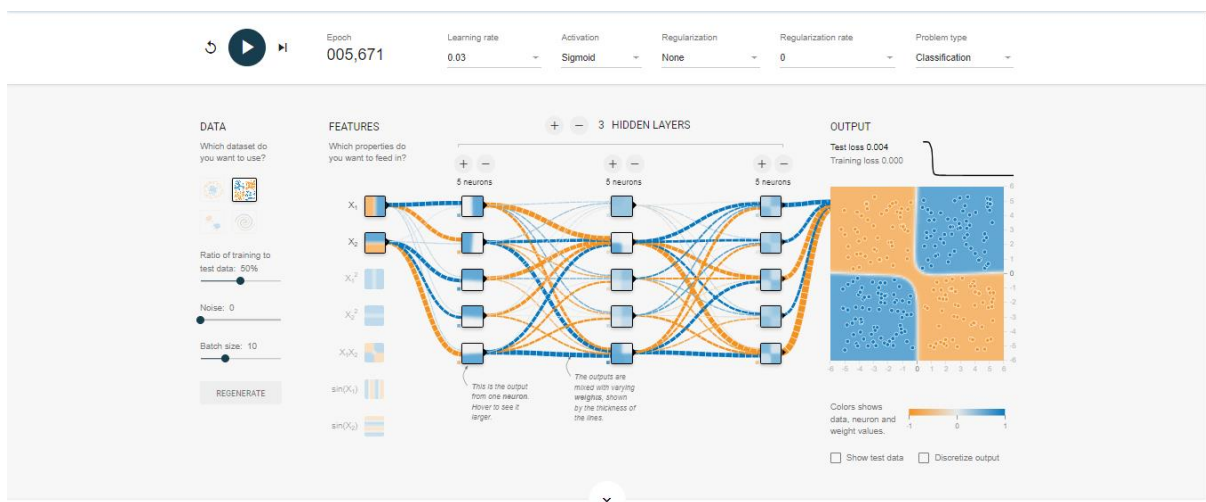
## TENSORFLOW-PLAYGROUND. -ASSIGNMENT -3

## DATA 1:



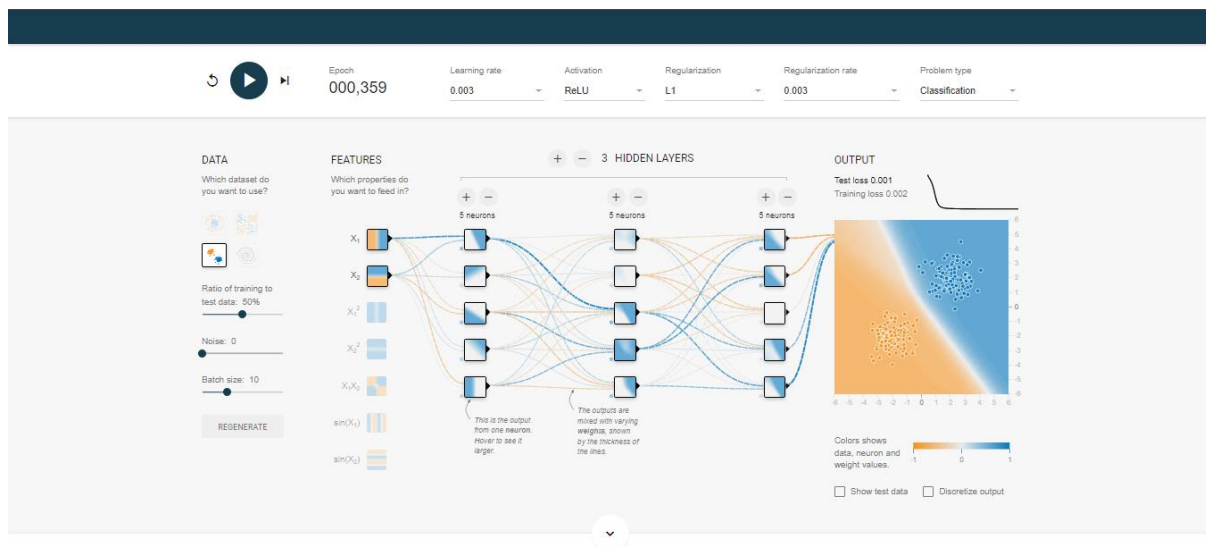
for data case 1 , the input data is a point of  $(x,y)$  where  $x$  and  $y$  are in range of  $(-6, 6)$ . The network has 3 hidden layers of  $[5, 5, 5]$  (that is, 5 neurons per each hidden layer), with the input layer of 2 and the output layer of 1 for classification. The ratio of Training and Test Data is 0.5. The Training loss is 0.0 and test loss is 0.001 after the training with epoch of 391. Learning Rate is 0.03. The Activation function is Tanh. Regularization is none.

## DATA 2:



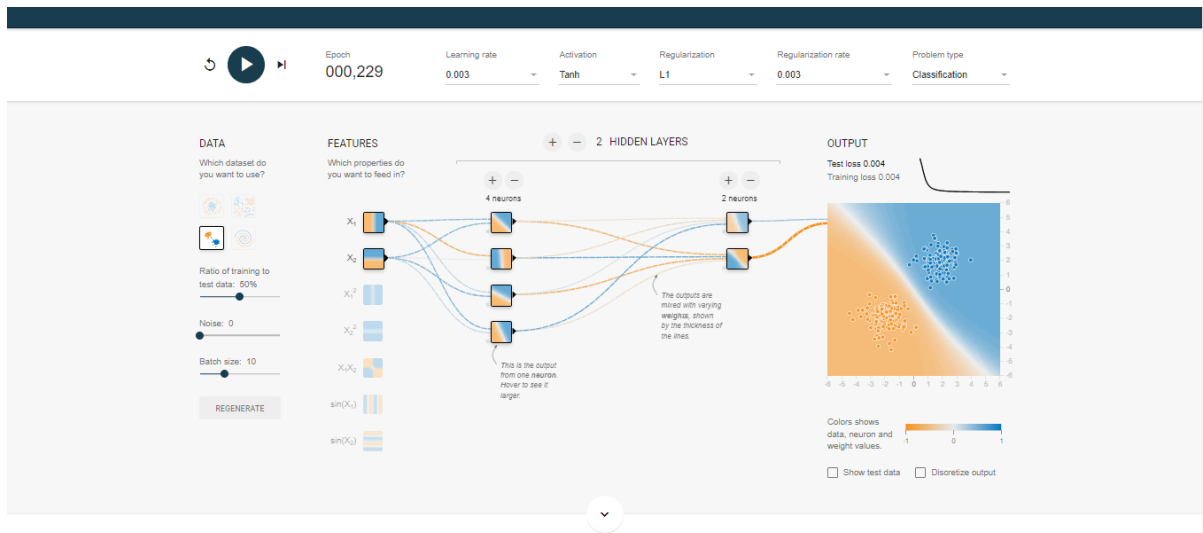
for data case 2 , the input data is a point of (x,y) where x and y are in range of (-6, 6). The network has 3 hidden layers of [5, 5, 5] (that is, 5 neurons per each hidden layer), with the input layer of 2 and the output layer of 1 for classification. The ratio of Training and Test Data is 0.5. The Training loss is 0.0 and test loss is 0.004 after the training with epoch of 5671. Learning Rate is 0.03. The Activation function is sigmoid. Regularization is none.

### DATA-3:



for data case 3 , the input data is a point of (x,y) where x and y are in range of (-6, 6). The network has 3 hidden layers of [5, 5, 5] (that is, 5 neurons per each hidden layer), with the input layer of 2 and the output layer of 1 for classification. The ratio of Training and Test Data is 0.5. The Training loss is 0.002 and test loss is 0.002 after the training with epoch of 359. Learning Rate is 0.03. The Activation function is ReLU. Regularization is L1, with regularization rate of 0.003.

### DATA 4:



for data case 4 , the input data is a point of  $(x,y)$  where  $x$  and  $y$  are in range of  $(-6, 6)$ . The network has 3 hidden layers of  $[4,2]$  (that is, 4neurons in one layer and 2 in other layer.), with the input layer of 2 and the output layer of 1 for classification. The ratio of Training and Test Data is 0.5. The Training loss is 0.004 and test loss is 0.004 after the training with epoch of 229. Learning Rate is 0.03. The Activation function is Tanh. Regularization is L1,with regularization rate of 0.003.