Assignment 9.1
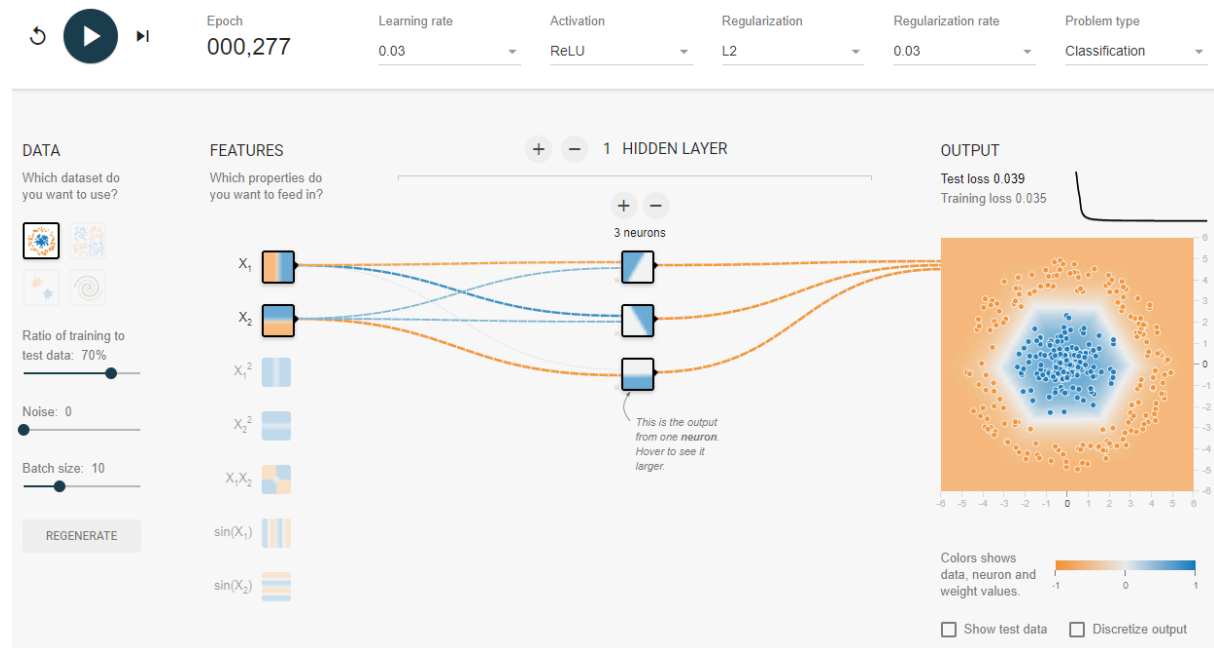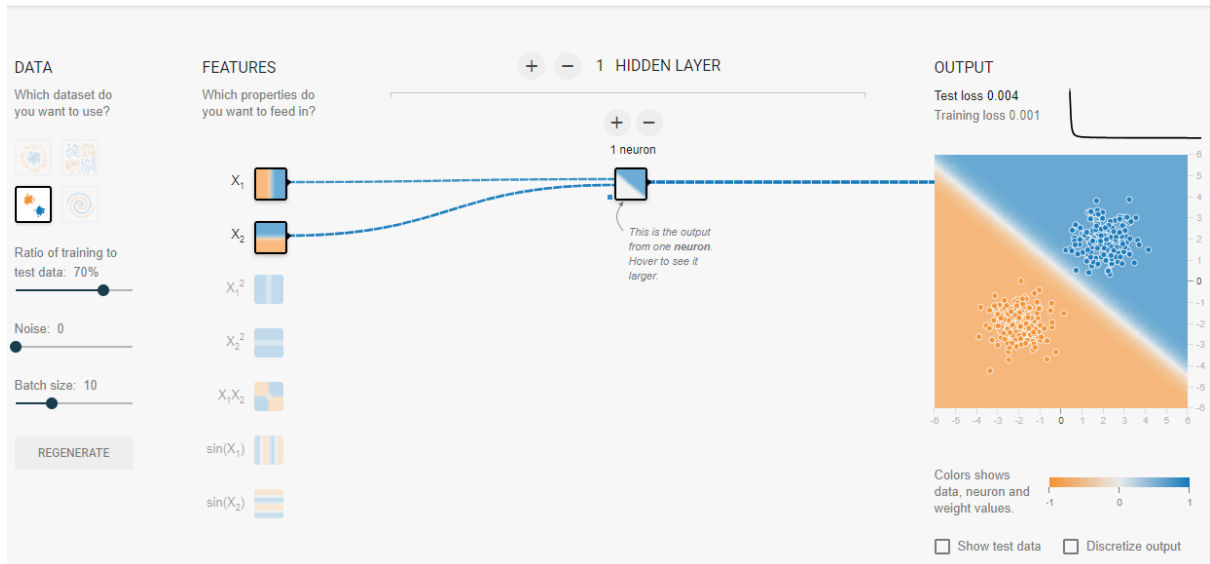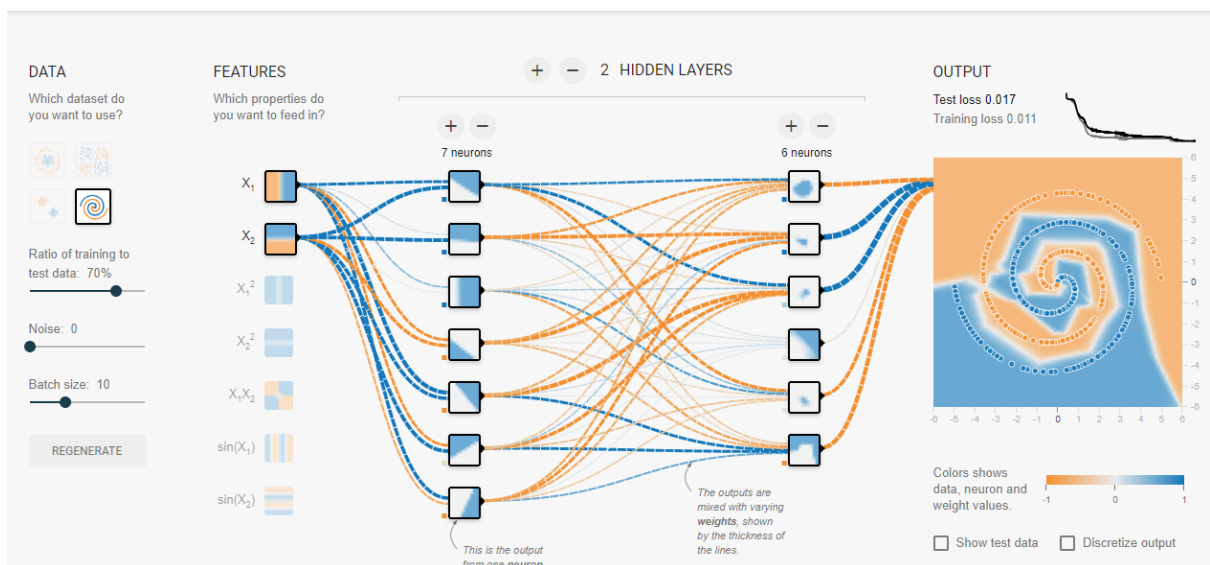
Epoch 000,153

Learning rate 0.03

Activation ReLU

Regularization L2

Regularization rate 0.001

Problem type Classification

DATA

Which dataset do you want to use?

Ratio of training to test data: 70%

Noise: 0

Batch size: 10

REGENERATE

FEATURES

Which properties do you want to feed in?

X_1

X_2

X_1^2

X_2^2

X_1X_2

$sin(X_1)$

$sin(X_2)$

1 HIDDEN LAYER

1 neuron

This is the output from one neuron. Hover to see it larger.

OUTPUT

Test loss 0.004
Training loss 0.001

Colors shows data, neuron and weight values.

-1   0   1

☐ Show test data   ☐ Discretize output

Epoch 002,173

Learning rate 0.03

Activation ReLU

Regularization L2

Regularization rate 0.001

Problem type Classification

DATA

Which dataset do you want to use?

Ratio of training to test data: 70%

Noise: 0

Batch size: 10

REGENERATE

FEATURES

Which properties do you want to feed in?

X_1

X_2

X_1^2

X_2^2

X_1X_2

$sin(X_1)$

$sin(X_2)$

2 HIDDEN LAYERS

7 neurons

6 neurons

This is the output from one neuron.

The outputs are mixed with varying weights, shown by the thickness of the lines.

OUTPUT

Test loss 0.017
Training loss 0.011

Colors shows data, neuron and weight values.

-1   0   1

☐ Show test data   ☐ Discretize output

WITH 20 % NOISE: