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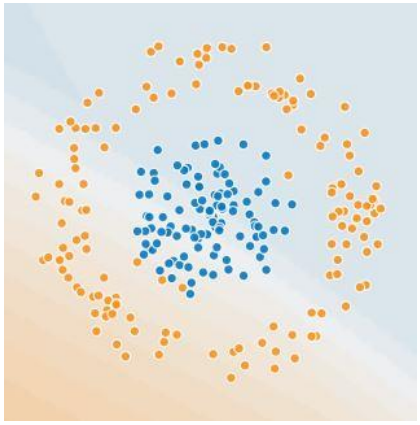
Exercise.

Playground TensorFlow.

Exercise 1

Given the



”Circles dataset” (here without noise, try to regulate noise level).

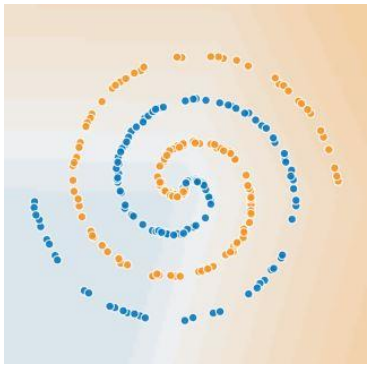
Using the Relu activation function. How many hidden layers, with howmany neurons do you need to correctly classify the dataset? What is an appropriate learning level (i.e. what is too low, and what is too high)?

Thickness of lines represent weight values. Mouseover a hidden unit tell us what this particular neuron is doing.

What is the smallest network that classifies correctly? Using which activation function?

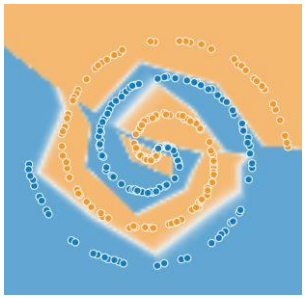
Exercise 2

Looking at the spiral dataset



How many hidden layers do we need to classify correctly?

I.e. into something like:



Minimum numbers of neurons in the hidden layers?

Proper learning rate for a “reasonable” training time (number of epochs)

Which activation function did you use?

Exercise 3.

Can you classify correctly (exercise 2) with an even smaller neural net? Using another activation function?

Inspiration:

https://www.youtube.com/watch?v=ru9dXF04iSE