How?

a.] Given some inputs, neurons aka nodes do a bunch of calculations in order to represent the input wrt some correct label, then return an output which will be close to the correct label.

b.] We can talk about how this works in terms of loops. Three types of loops get this done;

- Loops that live in each ***neuron***, that enable each neuron to do calculations with respect to other neurons.
- Loops that create and organize the neurons above into layers, i.e. our ***neural network.***
- Loops responsible for generating a training scenario that feeds multiple sets of input training data to the neural network, i.e. our ***mainExecutionClass***.

c.] In each training scenario, neurons take a set of inputs, do calculations based on those inputs wrt the correct label, and then produce guesses that are initially terrible. So the neural network is being "supervised" in terms of the correct labels.

- {Eg 1 Training cycle : take input set [1,0] wrt expected correct label = 1, generate guess = .18, which is terrible}
- In other words, the neural network takes many input/correct label pairs, and returns a guess aka answer each cycle, where input=[1,0] and the label =1, is an example of an input/label pair, and the guess will be a real number like .18.

d.] After roughly 800 training cycles in the case of our xor neural network model, aka taking 800 sets of inputs/correct label pairs, the model would have returned sensible guesses that would be close to the correct labels.

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