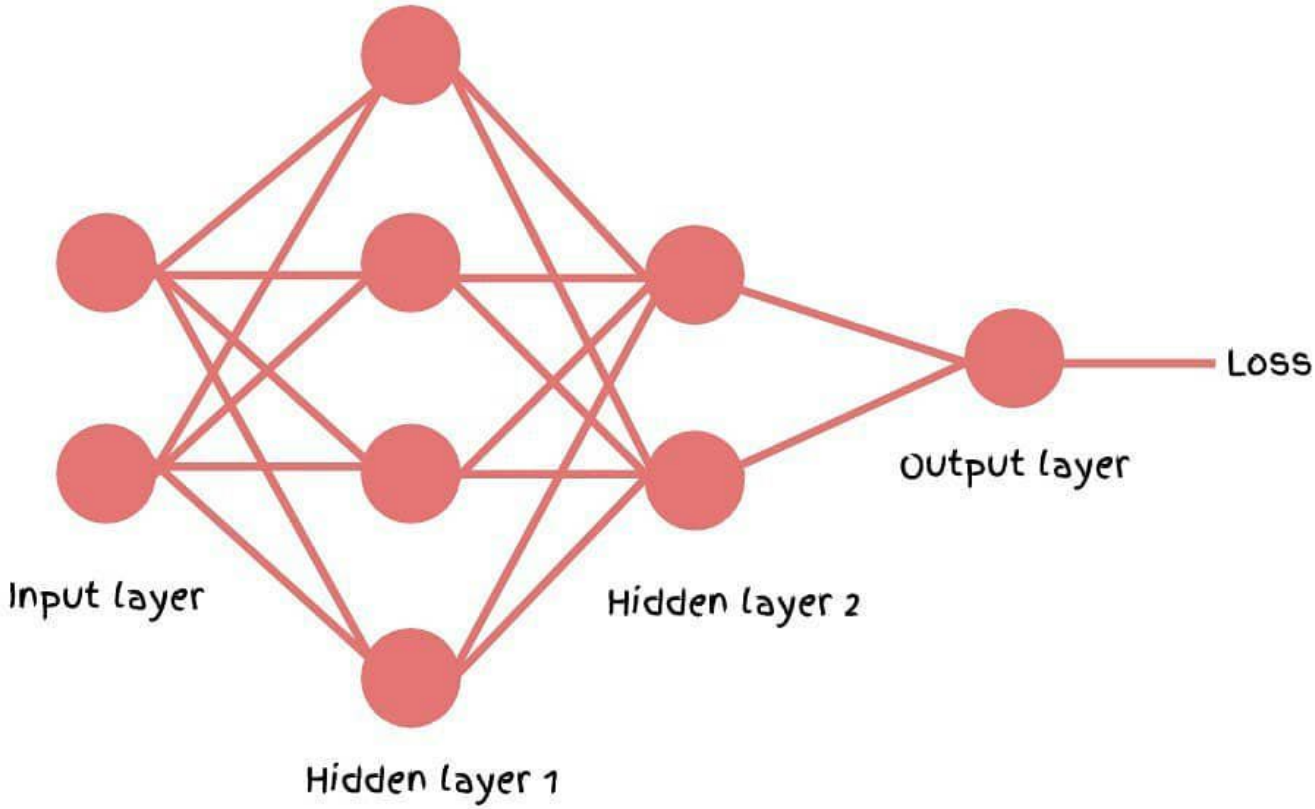
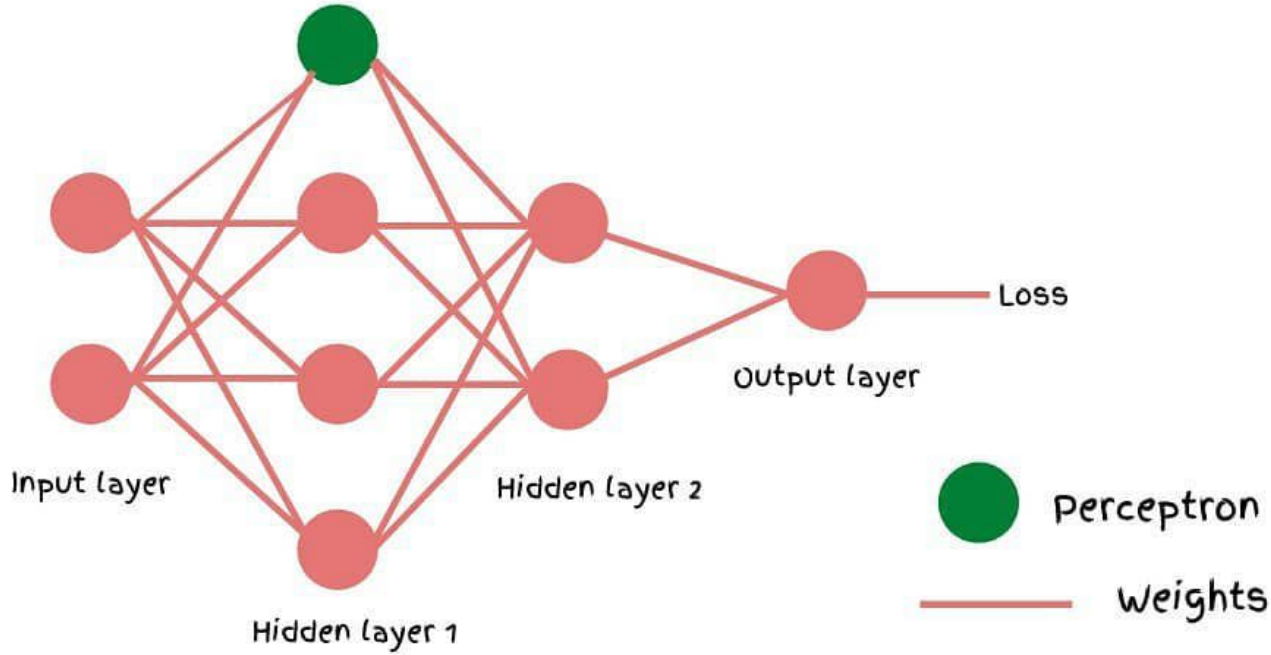
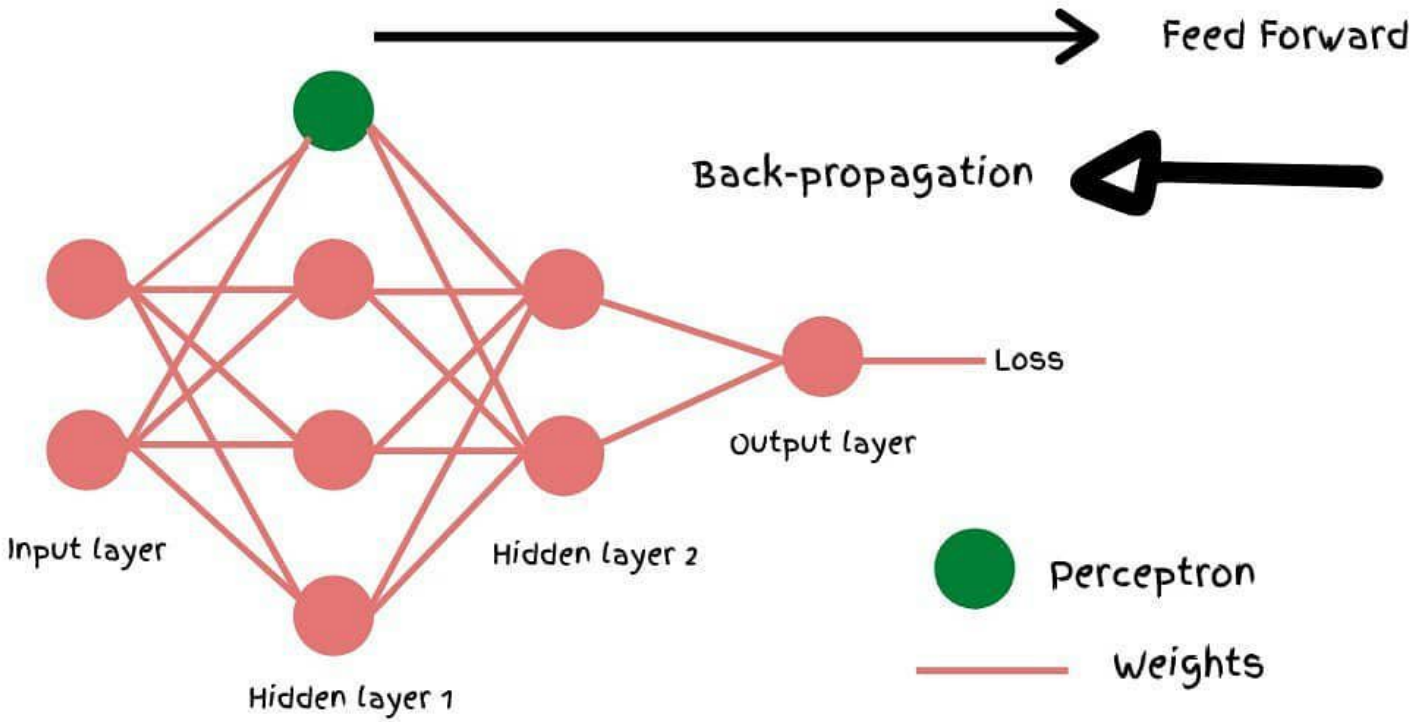


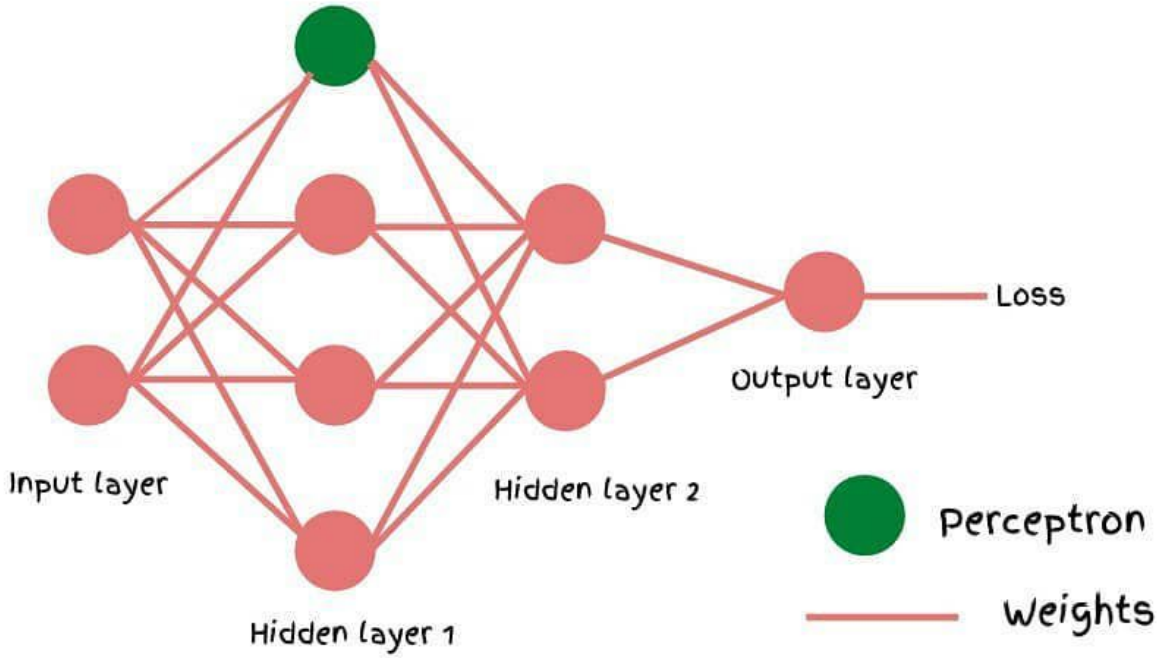
What is Artificial neural network?



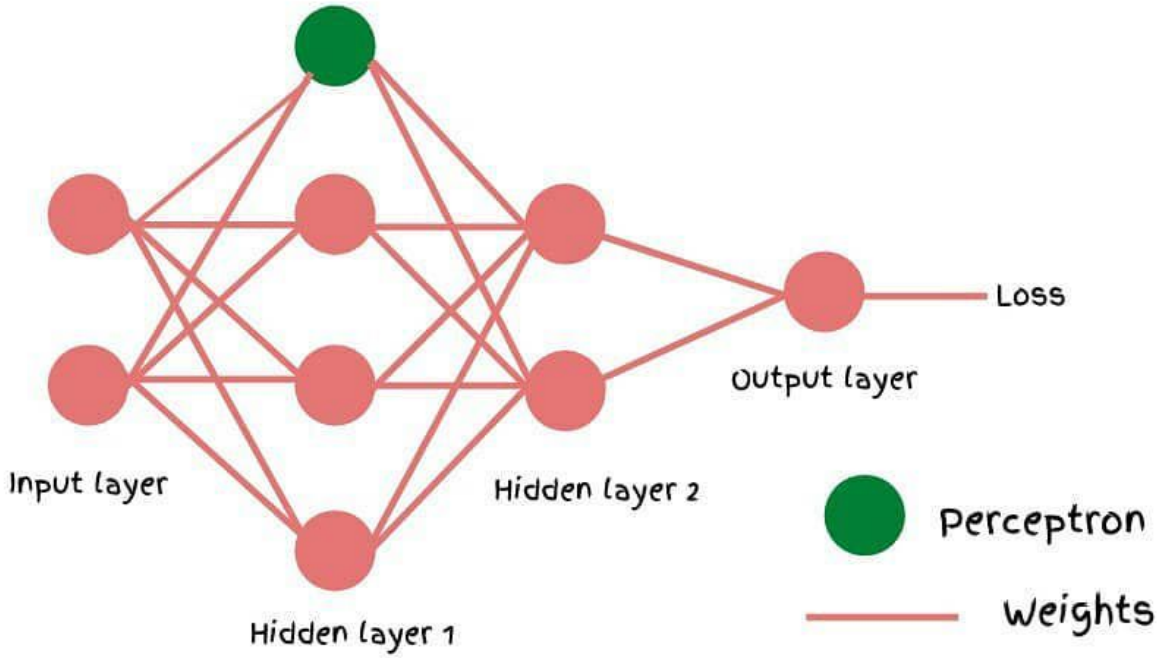
- And these weighted sum is passed through a function which is also called activation function(defines the output given an input)
- This is continued until the last output layer and then loss(the difference between original values and predicted values) is calculated.
- Weights are like signal strength, how influential that feature is.



- These weights are initialized randomly and learned in the process of minimizing the loss.
- We calculate the loss and we sent it back to the network so the network learn the weights to reduce the loss.
- This process is called Back-propagation.
- The weights are learned using an optimization algorithm such as gradient descent



- As i already said deep learning is inspired from biological neurons and they created perceptron.
- Artificial neural network is a synonym of multi-layer perceptron(multiple perceptrons are stacked in a layer and there are multiple layers). with non linear activation function
- ANN consists of many things like input, hidden, output, nodes, layers, weights, bias, activation function
- The working is simple you give input and these are passed to a neuron (perceptron)



- The only difference between perceptron / multi-layer perceptron or ANN is.
- Perceptron uses step function as a activation function
- ANN uses non linear activation function.
- I will discuss more about perceptron in my next post as it is the most basic concept we need to learn to understand ANN's.