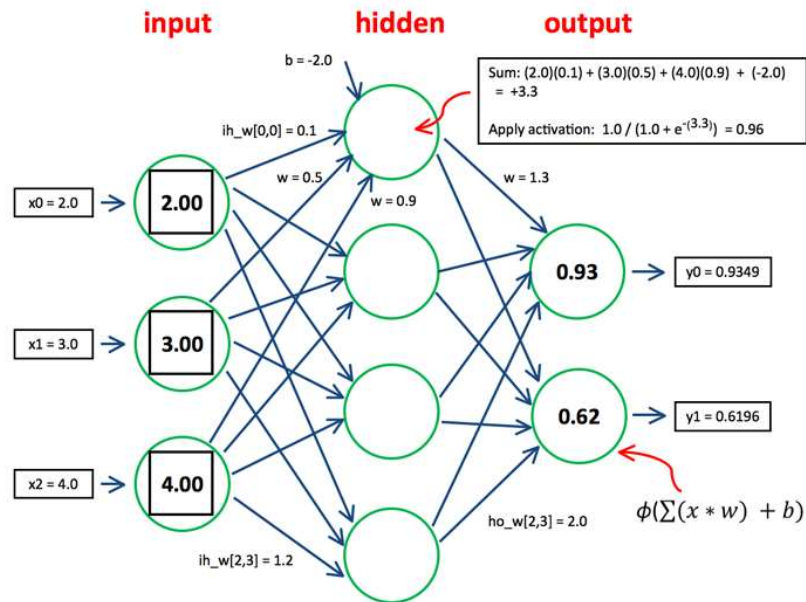# Neural Networks

Reflecting the behavior of the human brain, Neural Networks allow computer programs to learn and recognize patterns and solve common problems in AI.

How it works

Artificial neural networks (ANNs) are comprised of node layers, containing an input layer, one or more hidden layers, and an output layer. Each node, or artificial neuron, connects to another and has an associated weight and threshold. If the output of any individual node is above the specified threshold value, that node is activated, sending data to the next layer of the network. Otherwise, no data is passed along to the next layer of the network.

- Neural Network can fit a squiggle to the data.
- The network starts with unknown parameters and weights and learn those values using back-propagation which uses chain rule.
- First the network predict some output and it will be propagated back to the network to minimize the loss function. After some epochs, the network will find the global minimal point for (approximately) for minimizing the cost function.