



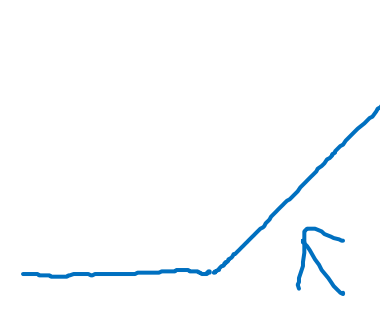
deeplearning.ai

Introduction to Deep Learning

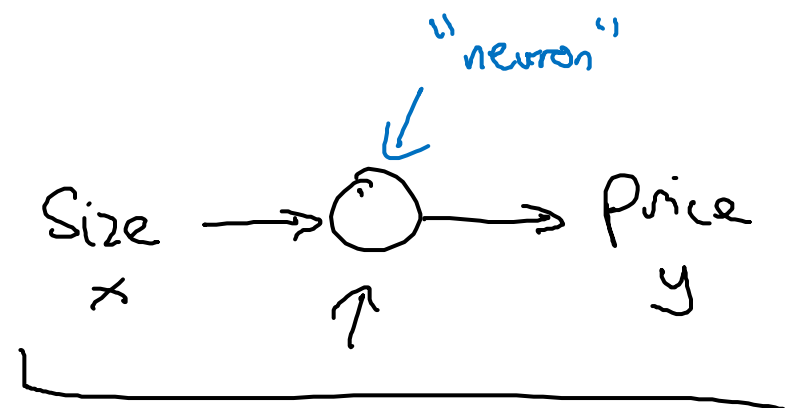
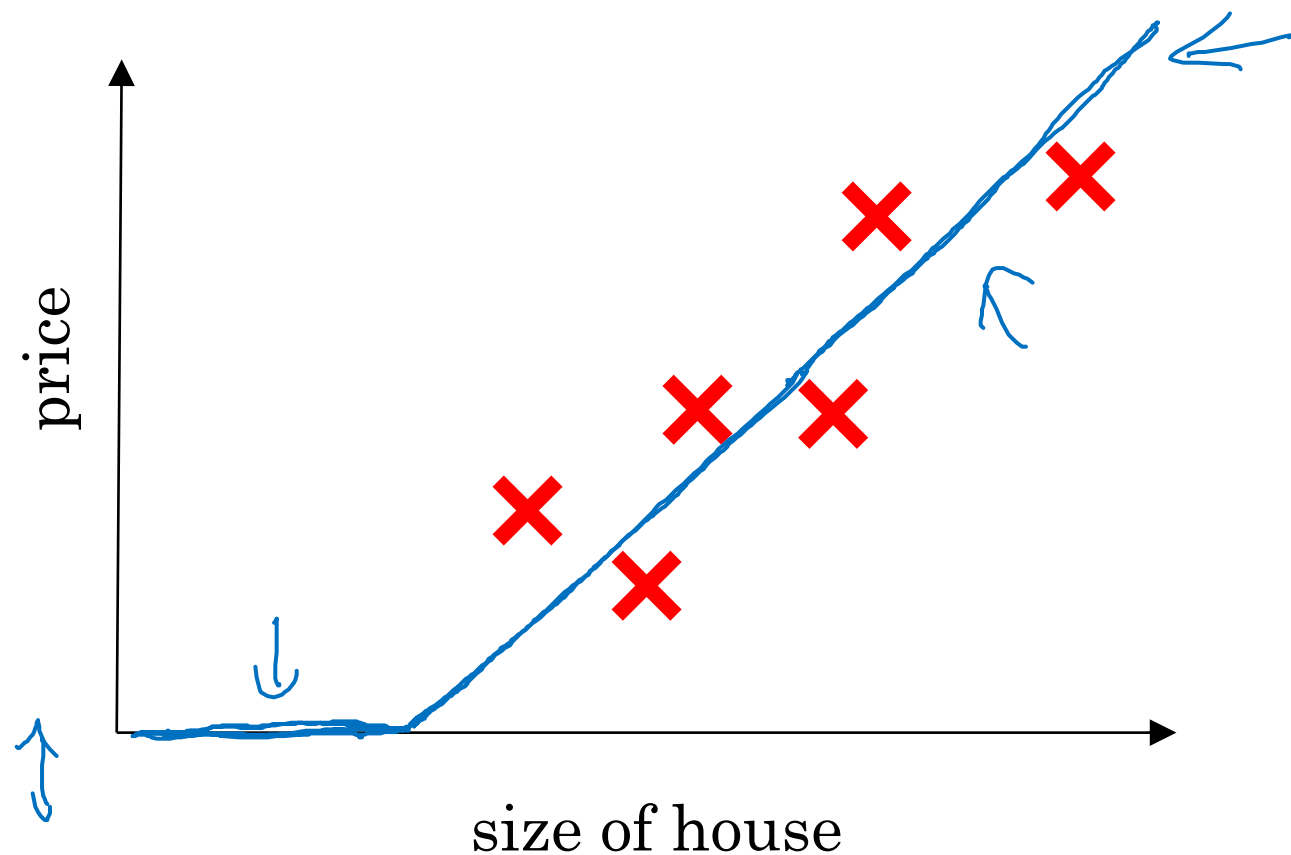
What is a Neural Network?

Housing Price Prediction

ReLU
Rectified
Linear
Unit

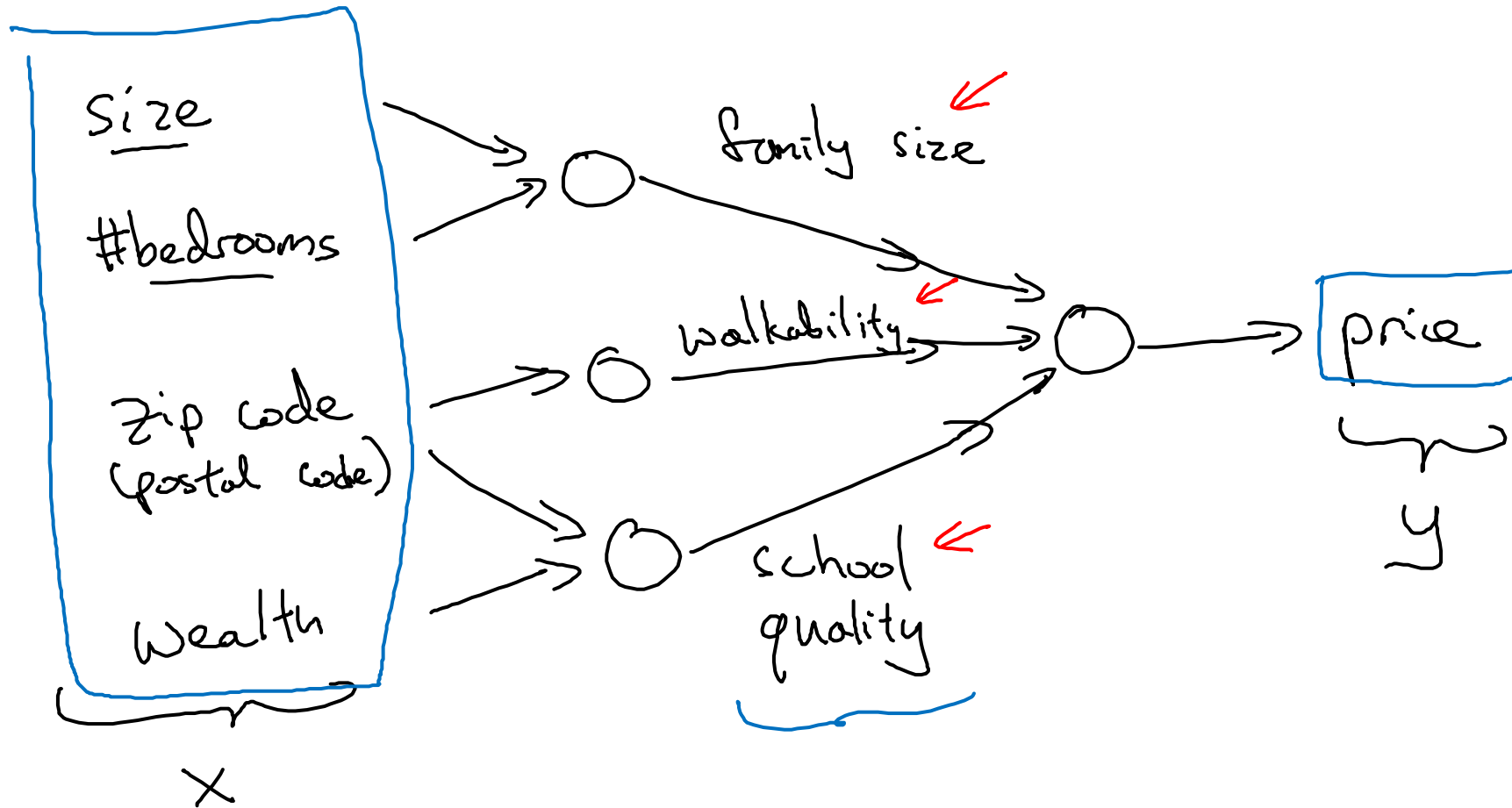


rectify just means taking a max of 0



So if you think of this neuron is being like a single lego brick, you then get a bigger neural network by stacking together many of these lego brick.

Housing Price Prediction

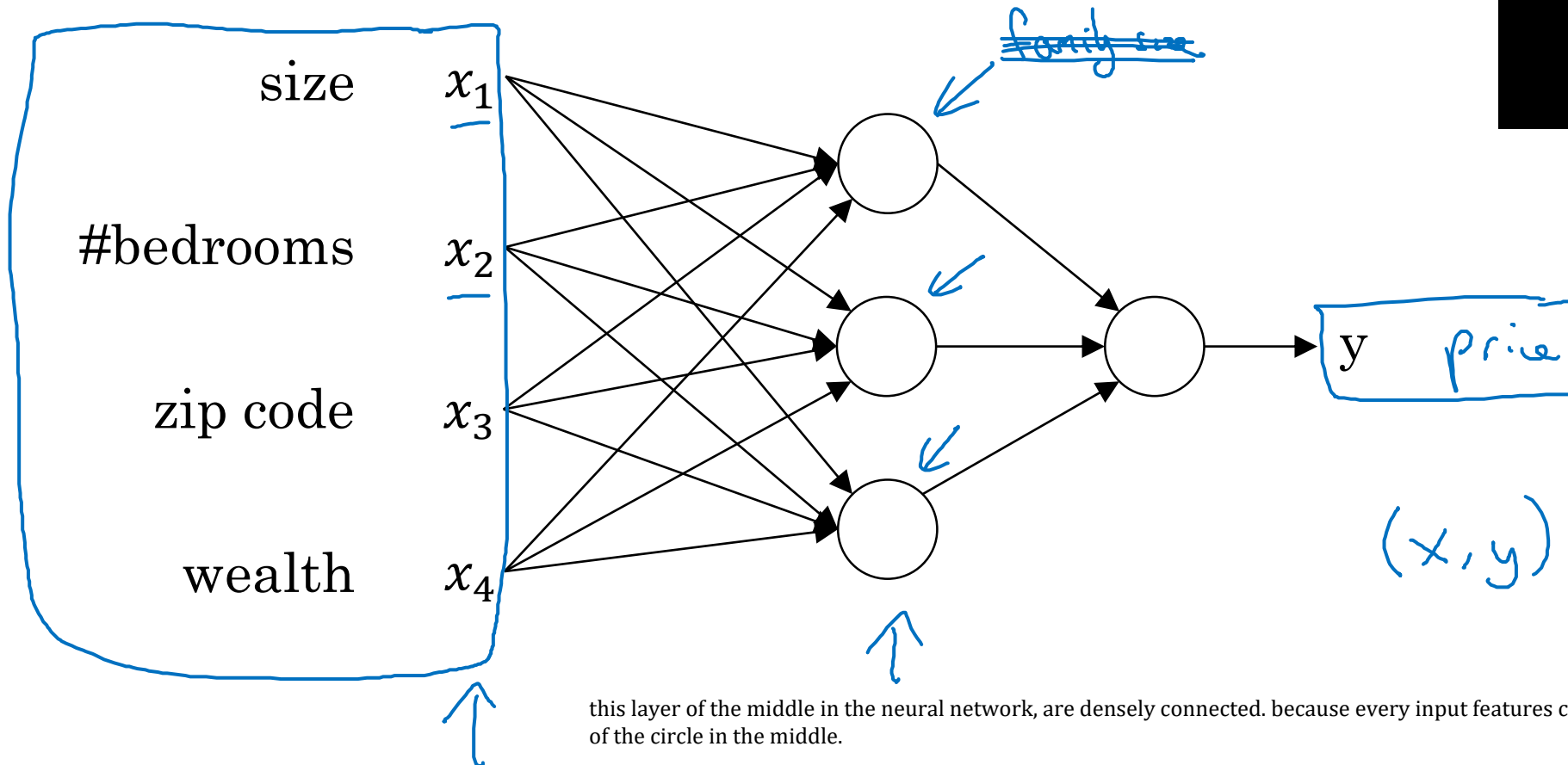


Part of magic of neural network is that when you implement it, you need to give it just the input, x . And the output y , for number of examples in your training set, and all these things in the middle it will figure out by itself.

Housing Price Prediction

**Drawing of
previous Image**

well, neural network, you decide whatever you want this node to be and we'll give you all four input features to compute whatever you want



this layer of the middle in the neural network, are densely connected. because every input features connected to everyone of the circle in the middle.

And the remarkable thing about neural networks is that given enough data about x and y , given enough training examples with both x and y , neural network are remarkably good at figuring out functions that accurately map from x to y .

So that's a basic neural network. It turns out that as you build out your own neural networks, you probably find them to be most useful, most powerful in supervised learning settings.

Meaning that you are trying to take an input x and map it some output y , like we just saw in the housing price prediction example.