**What Are Convolutional Neural Networks?**

Convolutional Neural Networks, like neural networks, are made up of neurons with learnable weights and biases. Each neuron receives several inputs, takes a weighted sum over them, pass it through an activation function and responds with an output.

The whole network has a loss function and all the tips and tricks that we developed for neural networks still apply on Convolutional Neural Networks.

Pretty straightforward, right?

Neural networks, as its name suggests, is a machine learning technique which is modeled after the brain structure. It comprises of a network of learning units called neurons.

These neurons learn how to convert input signals (e.g. picture of a cat) into corresponding output signals (e.g. the label “cat”), forming the basis of automated recognition.

Let’s take the example of automatic image recognition. The process of determining whether a picture contains a cat involves an activation function. If the picture resembles prior cat images the neurons have seen before, the label “cat” would be activated.

Hence, the more labeled images the neurons are exposed to, the better it learns how to recognize other unlabelled images. We call this the process of training neurons.