Twitter Thread by Pratham Prasoon



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Here's what you'll hear when you first get into machine learning.

- Neural networks
- Loss
- Weights
- Biases
- Epochs
- Neurons
- Optimizers
...

It can get very confusing really fast!

Here are some of the terms you should know about.
(I wish I had this before)

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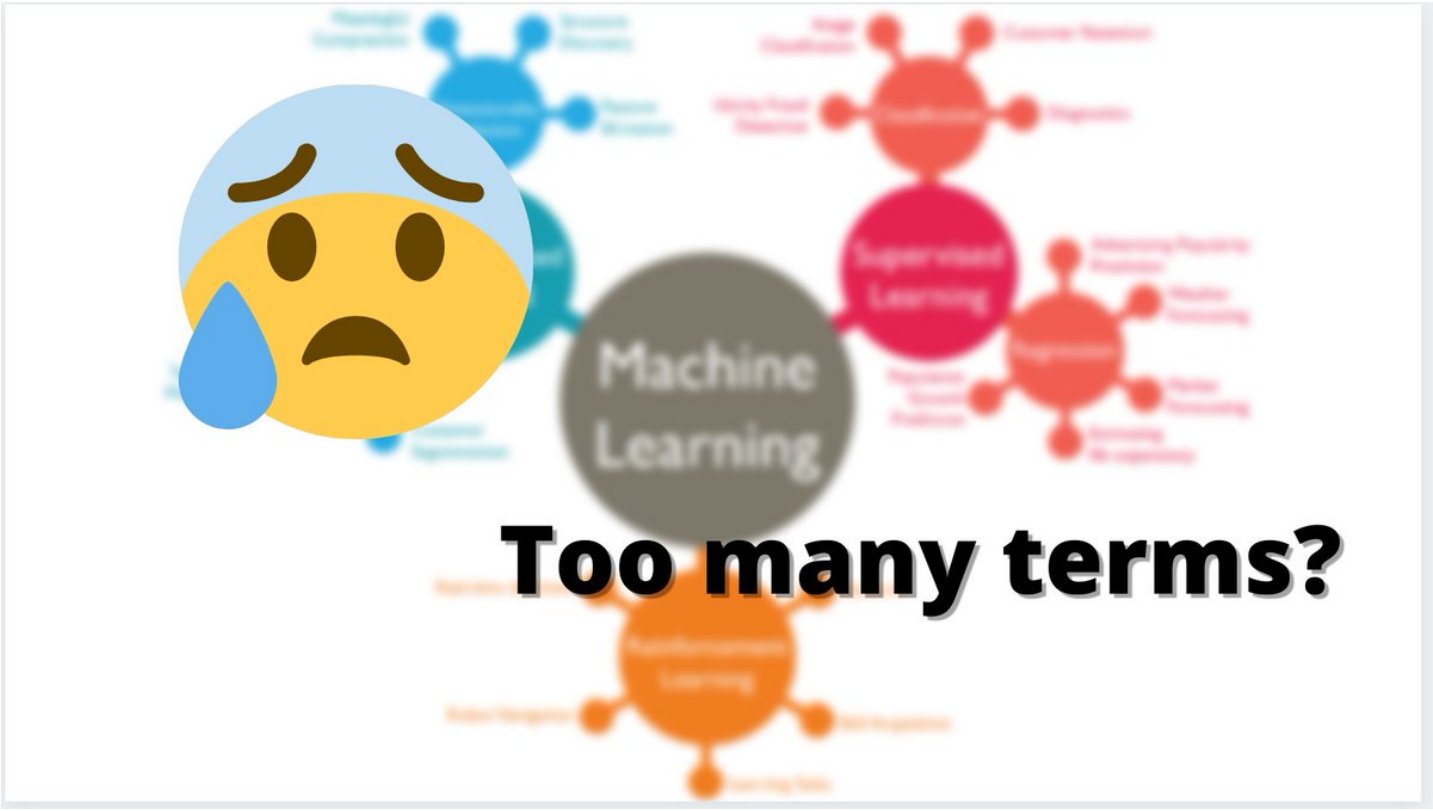


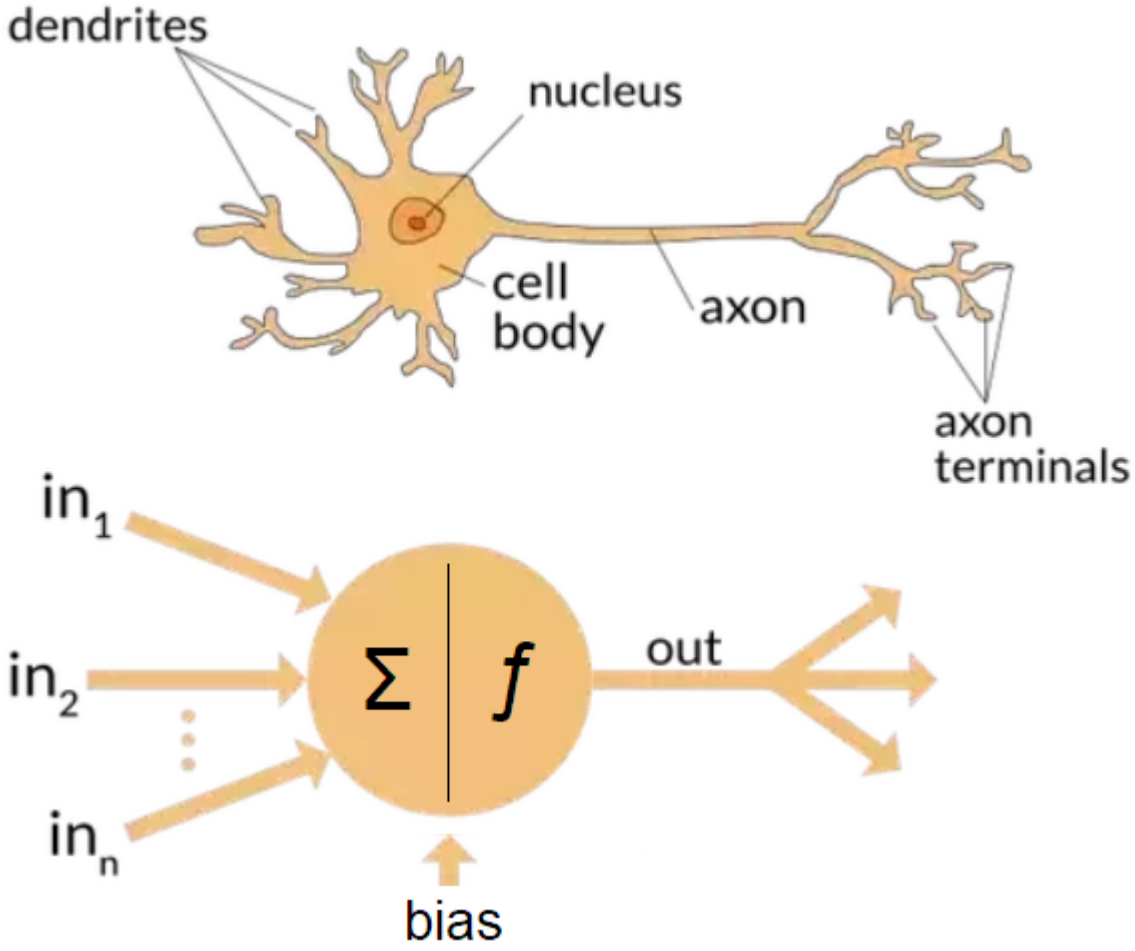
These terms won't mean anything unless you know what Machine learning is all about.

> Machine learning is the process of making a program which allows a computer to learn from data.

The data could be anything, images, audio or even text.

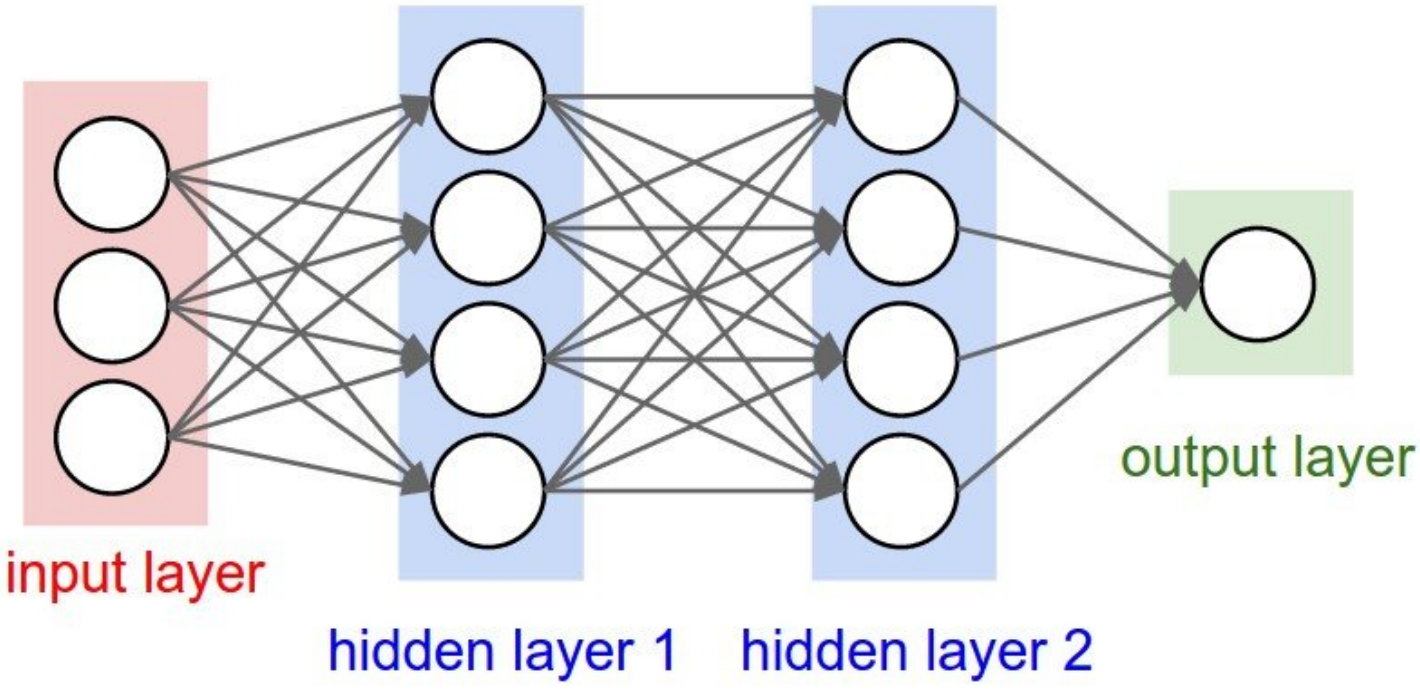
In machine learning we use something called a neural network, this is essentially an imitation of the human brain.

> Neural Networks are a digital imitation of the neurons you see in the human brain.



In these neural networks, data flows through them and each neuron (the circle) has a numerical value which will change.

> The value of a neuron gets changes to something which is close to what we want each time the data passes through the neural network.



Think of the neurons as dials on a lock, you have to tune every dial to open the lock.

It is almost impossible for a human to tune thousands of dials like these, but a computer certainly can.

Once the dials are well tuned, you have a well trained neural network!

Each dial's numeric value is dependent on a "weight" and a "bias". The weight determines how important the neuron is and the bias make it flexible.

So here's a recap of what we've looked at so far:

The neural net is the brain of the machine learning model, the dials you have to adjust to make that neural net work are the neurons.

Let's move on■

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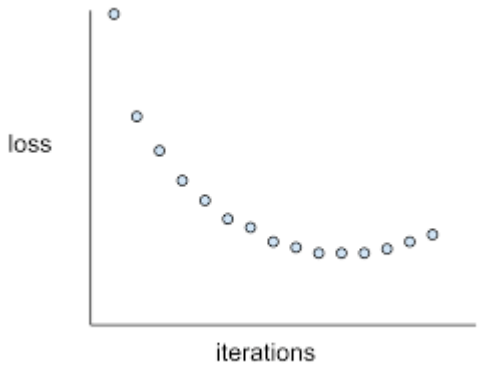
Each time data passes through the neural network, we get to know how wrong it is. The measure of how wrong a neural network is called the "loss". The neural network uses this thing called an "optmizer" to reduce "loss" and tries to get less wrong after each iteration.



The number of times the data passes through the neural net is called the "epoch".

That was a lot! Let's summarize■

Neural Network: The brain of our machine learning model
Neuron : Each dial in a neural network
Weight : How important the neuron is
Bias : Flexibility of neuron

Epoch : Number of times the data passes through the neural network
Loss : How wrong the neural net is
Optimizer : Tries to reduce loss and make the neural net less wrong

Now some FAQs
> How to get started with machine learning?
Here■

https://t.co/s5o54jt5oc

> Here's what your first 30 days of Machine Learning should look like.
>
> (I wish I had this before)
> \U0001f9f5\U0001f447 pic.twitter.com/7LsR7VsKB8
>
> — Pratham Prasoon (@PrasoonPratham) November 22, 2020

Which language to learn for machine learning?
> Python is the most common and well known, It would be my pick.

https://t.co/sey373KUpV

> If all you know is "Hello world" in Python \U0001f40d , here are the programming concepts you need to know to level-up your skills for machine learning.
>
> (and resources that will help you)
> \U0001f9f5\U0001f447 pic.twitter.com/xaO6PlE0Rc
>
> — Pratham Prasoon (@PrasoonPratham) November 25, 2020

I don't have a powerful PC, how do I get into machine learning?
> You don't need one, use Google Colab.

https://t.co/ATd8YNZppb

> Well, you don't even need a PC for getting started with machine learning.
>
> With the help of google colab, I am able to train a neural net using a cloud GPU on this phone for free.
>
> What excuse do you have now? pic.twitter.com/RWHSXtnRSy
>
> — Pratham Prasoon (@PrasoonPratham) November 26, 2020