Artificial Intelligence, Machine Learning and Deep Neural Networks

By
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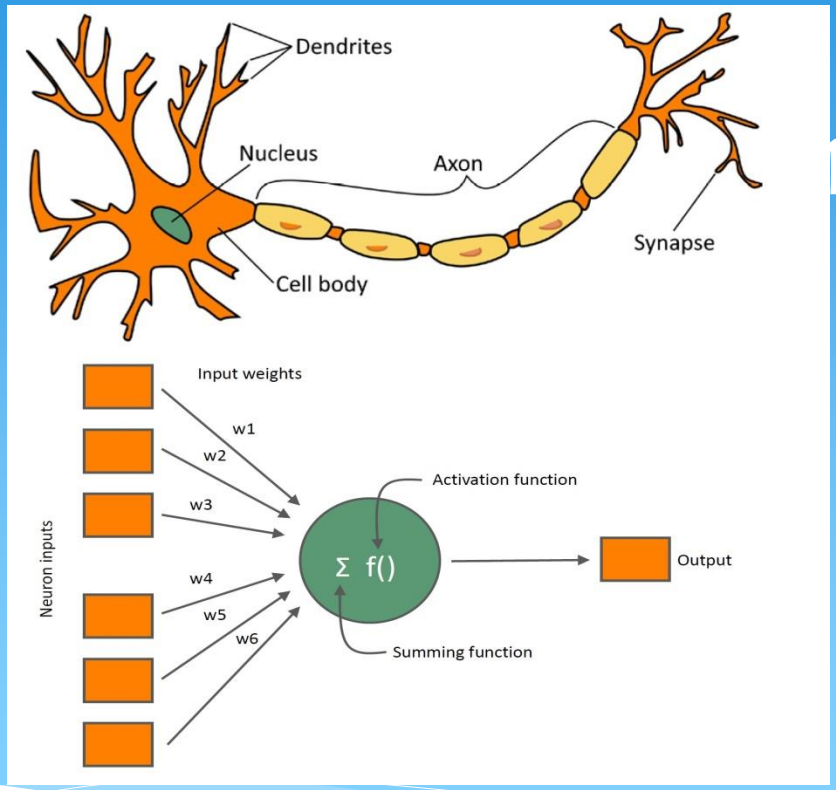
A **neural network** is made up of cells that work together to produce a desired result, although each individual cell is only responsible for solving a small part of the problem.8

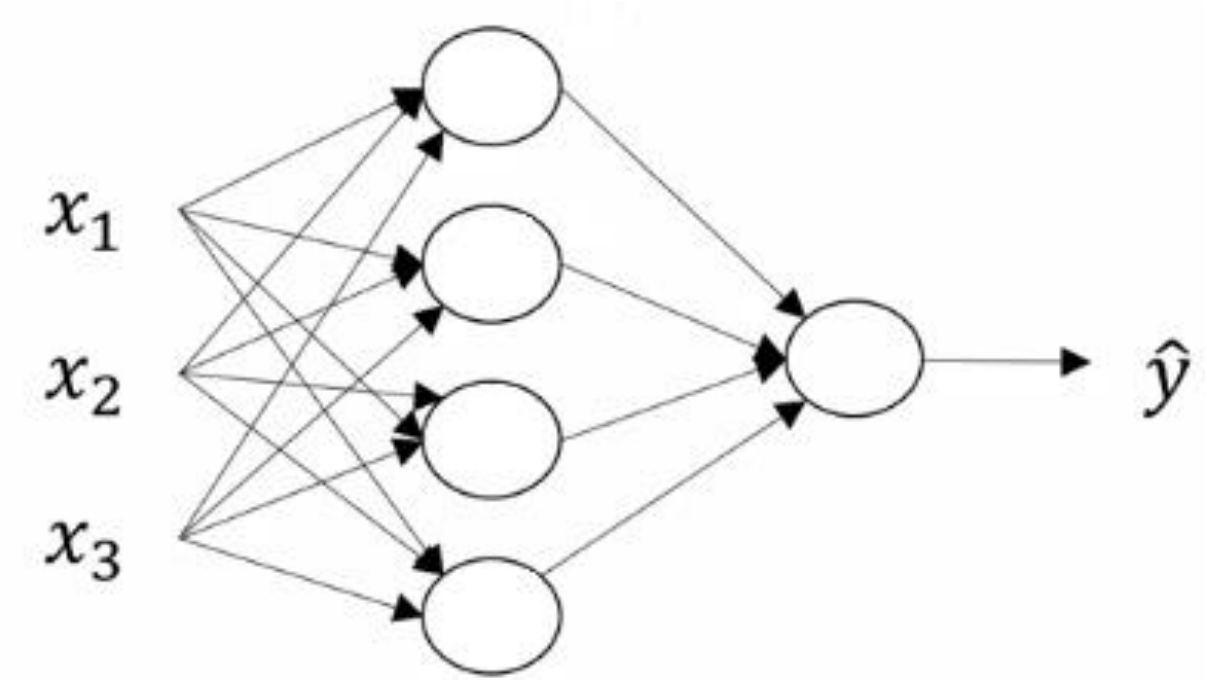
Neuron and Neural Network



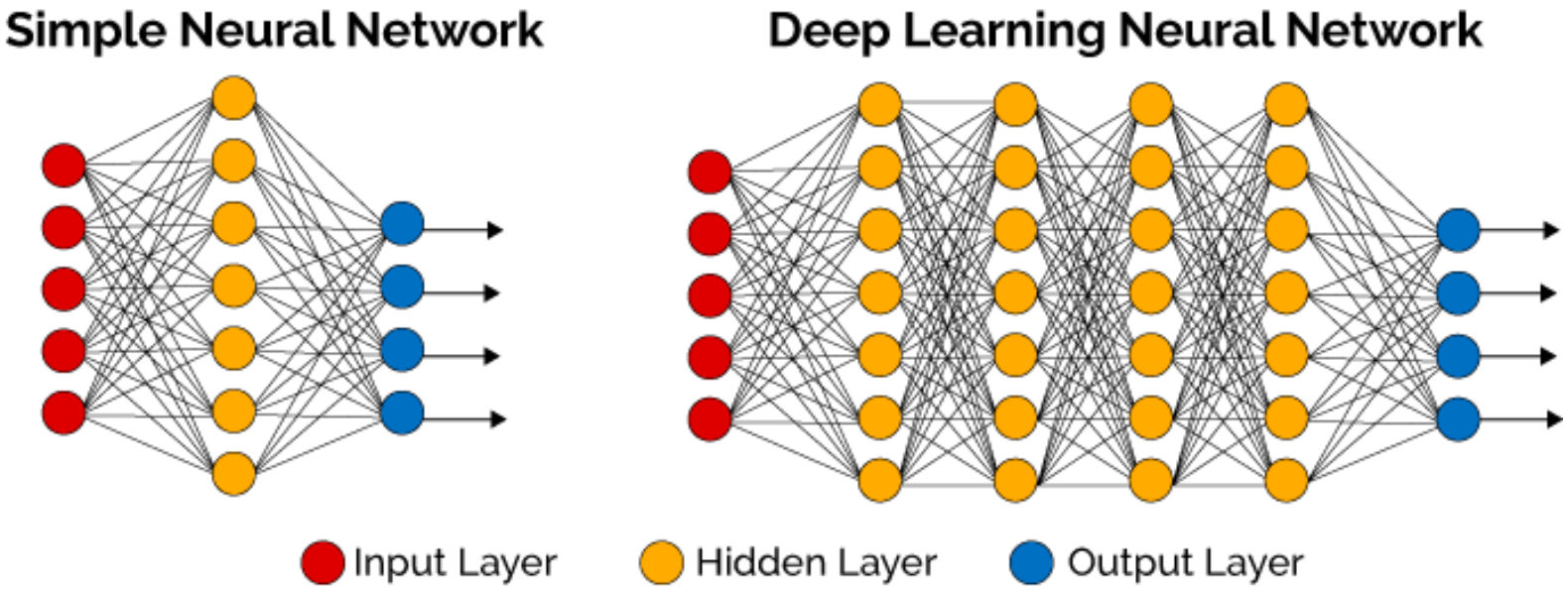
Lets start with NN

The **Universal Approximation Theorem** (UAT) declares that only one hidden layer, with a finite number of neurons, is enough for approximating any looked-for function.

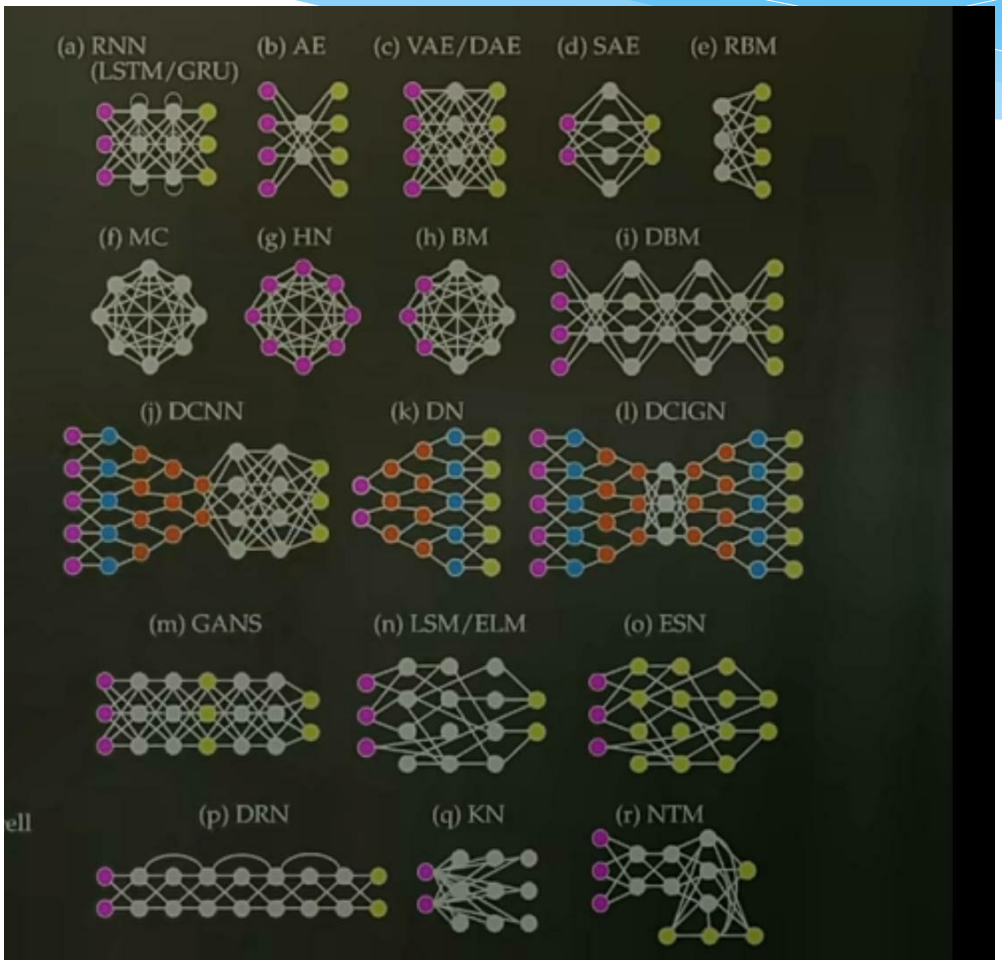
Shallow network



Deep Neural Network

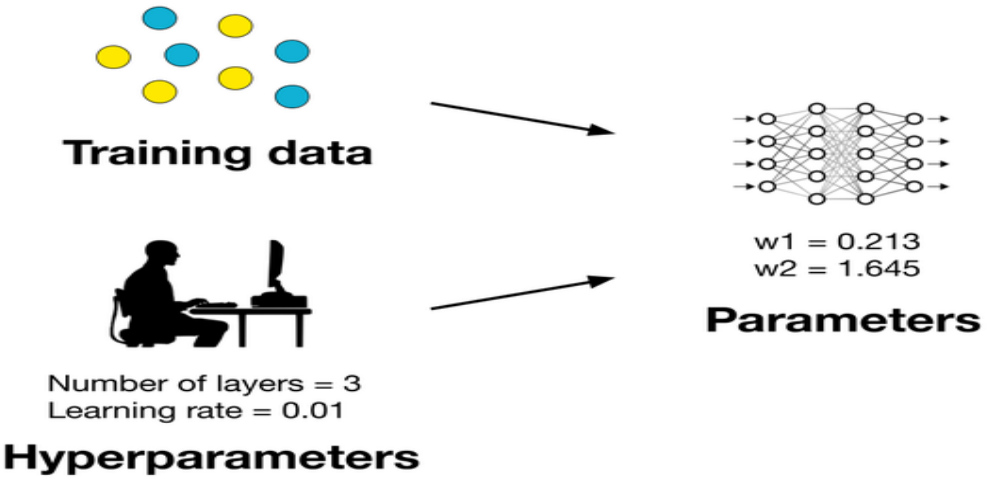


Types of networks

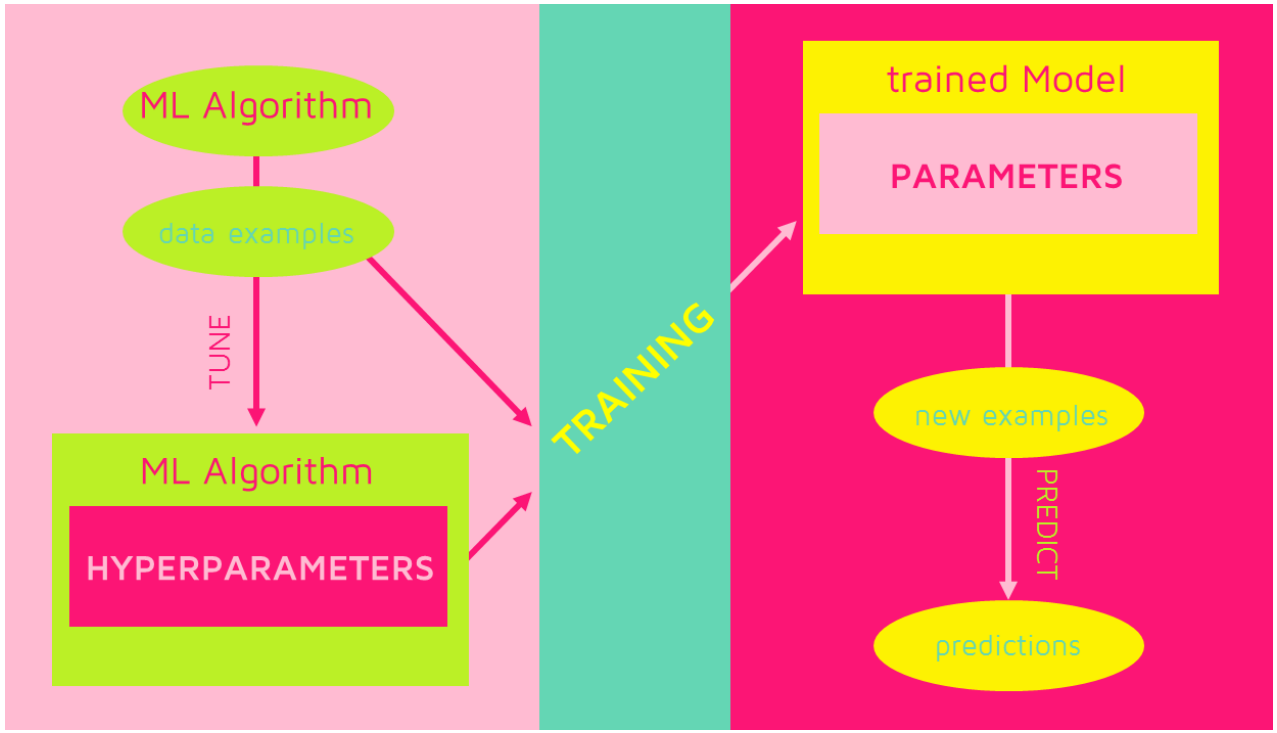


Into the networks..

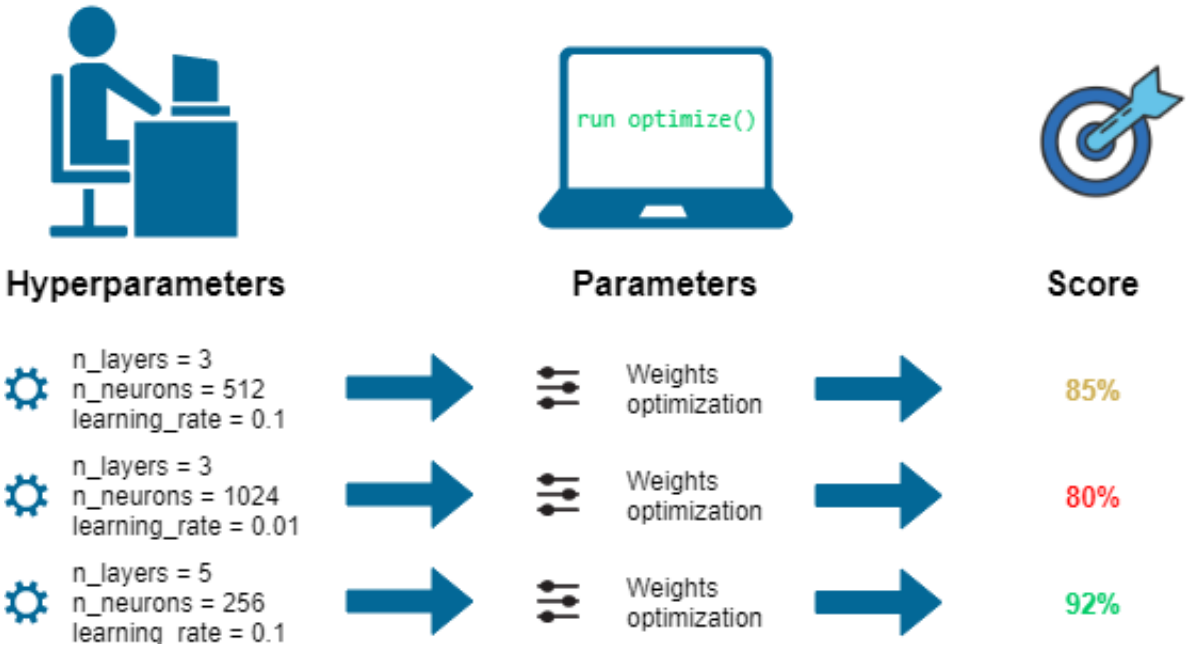
- Parameters vs. Hyperparameters



ML Parameters



Why are they Important



Feature extraction

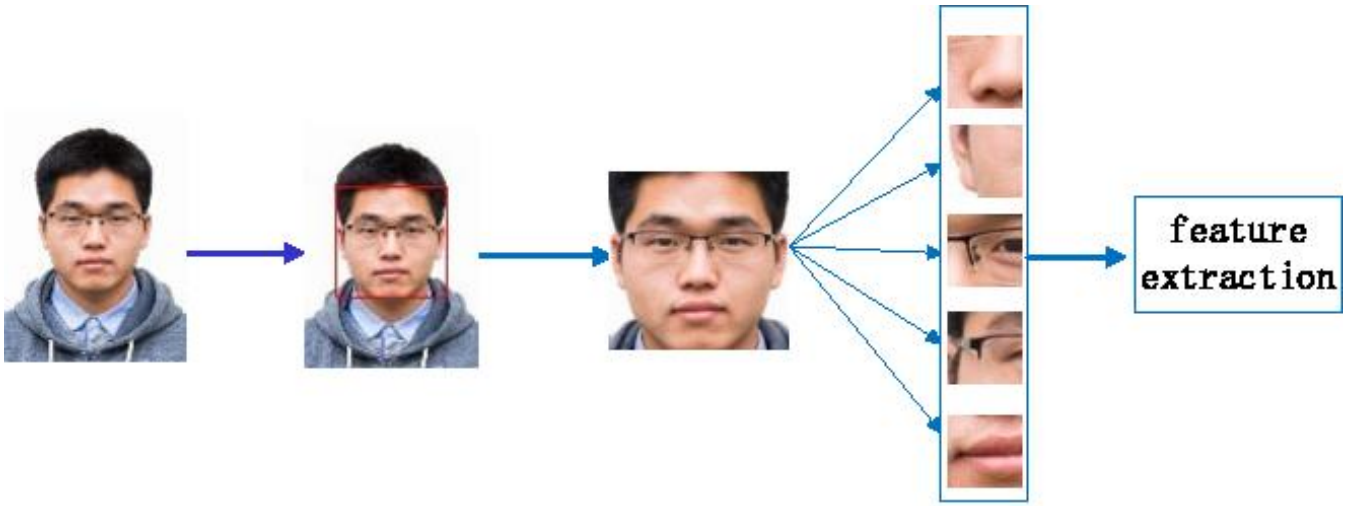
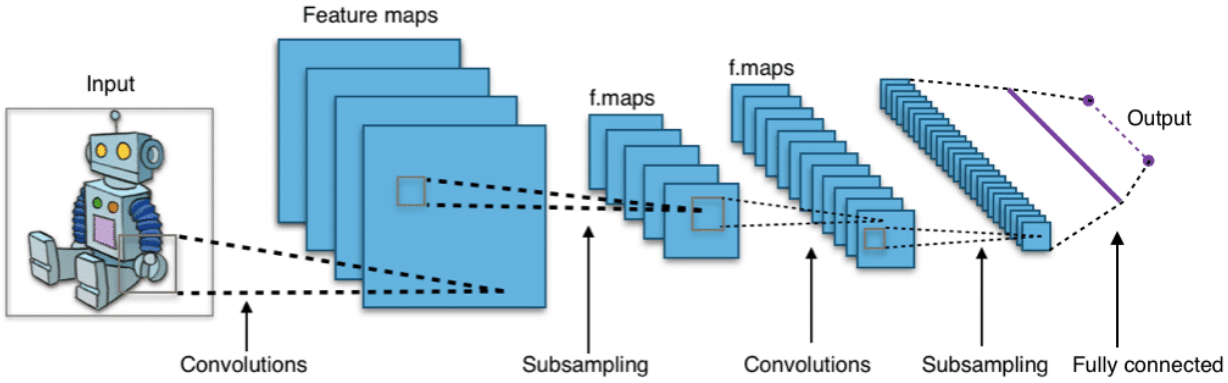
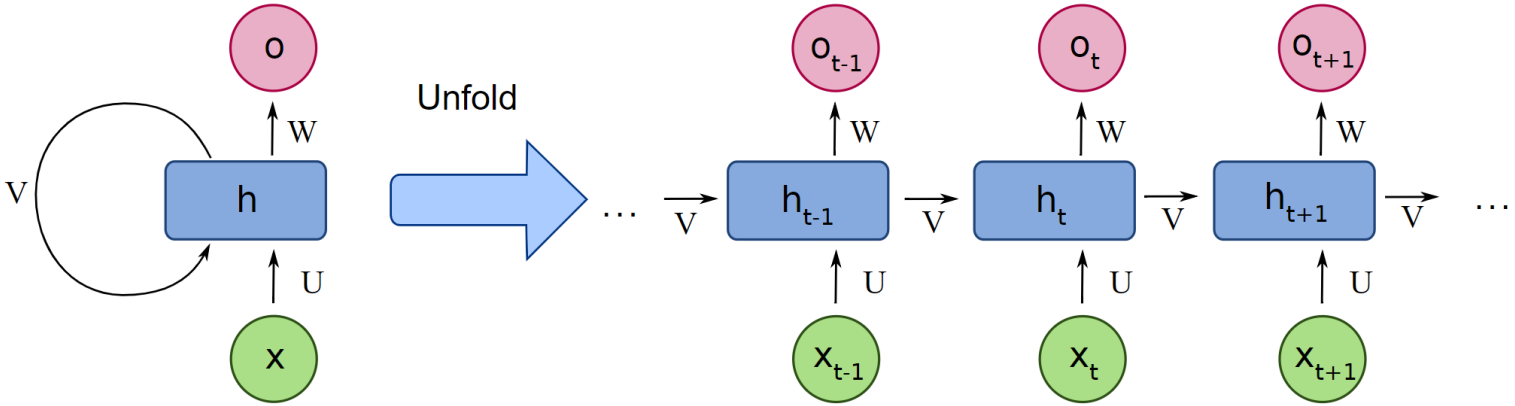


Fig. 5 Threshold clipping.

Convolutional Neural Network



Recurrent Neural Network



Difference between ML and Deep learning