Deep Learning

Inspired by human brains.

Ex: google translation, face detection, predicting earthquakes, healthcare, finance etc..

Types:

Artificial neural network (ANN):

Take data as input.

Image recognition, speech recognition, natural language processing

Convolutional neural network (CNN):

Take images and video as input.

By reading image features it does image classification, object detection, image segmentation

Recurrent neural network (RNN):

Takes sequential data as input.

Time series, natural language translation, speech recognition

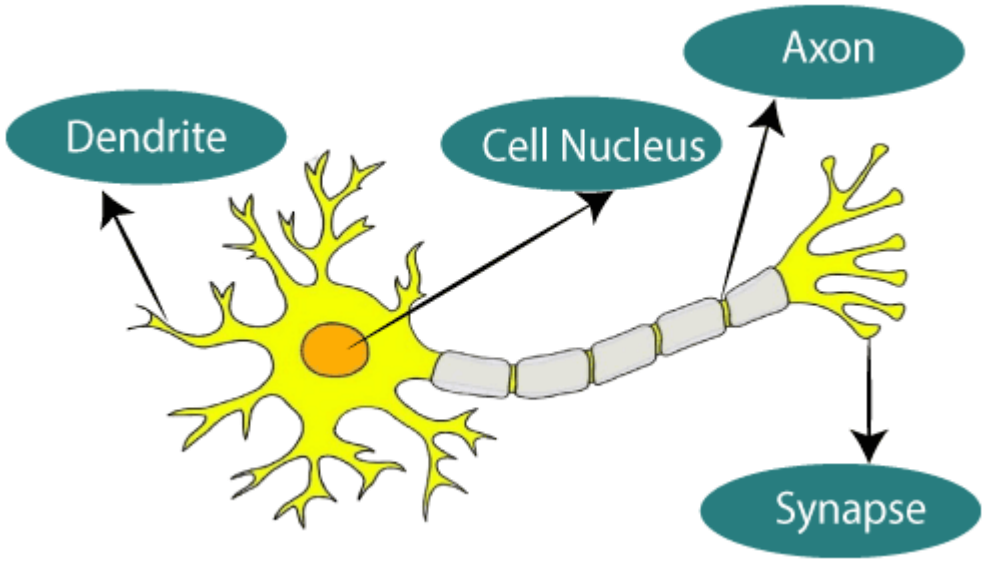
Nodes are interconnected in the form of neurons.

Artificial neural network (ANN):

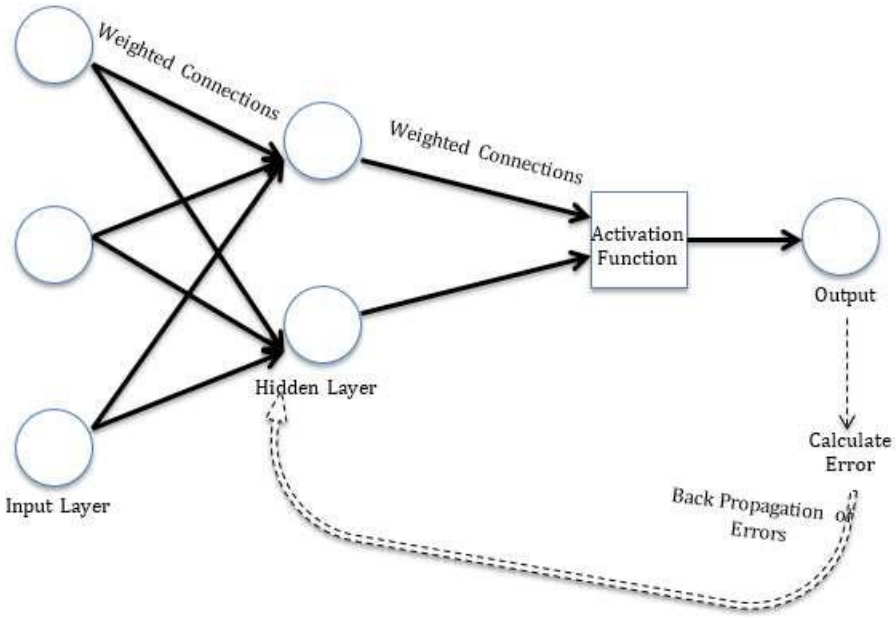
An Artificial neural network(ANN) may be defined as an information-processing model that is inspired by the way biological nervous systems, such as the brain, process information.

ANN is composed of large number of highly interconnected processing units(neurons) working together to solve specific problems

Face recognition, pattern recognition.



Neuron


Weighted Connections
Weighted Connections
Activation Function
Output
Hidden Layer
Calculate Error
Input Layer
Back Propagation of Errors