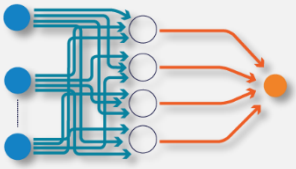
THE ULTIMATE
DEEP LEARNING ALGORITHMS

ITEM #1

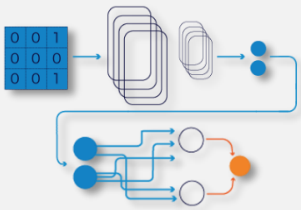
Artificial Neural Networks



Also sometimes called Vanilla Neural Nets, ANNs are the most basic type of Deep Learning algorithms. Designed to mimic processes in the human brain they create a facility for a machine to learn instead of being hard-coded what to do. Artificial Neural Networks are a type of Supervised Learning Algorithm.

ITEM #2

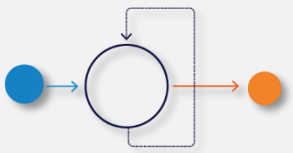
Convolutional Neural Networks



ConvNets for short – they were originally invented in the 80s-90s for character recognition on handwritten checks and envelopes. They've come a long way since and are now used for processing of any kind of visual data: from facial recognition to self-driving cars. CNNs like ANNs fall into the branch of Supervised Learning.

ITEM #3

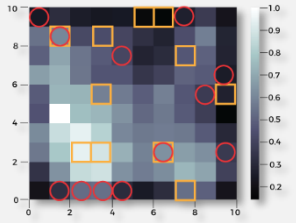
Recurrent Neural Networks



RNNs are the heavy-artillery of Supervised Networks. The idea is for NNs to have memory allowing them to process time series data and solve complex problems such as translation and video captioning. This is mostly possible thanks to a particular type of RNN called the Long Short-Term Memory (LSTM) network.

ITEM #4

Self-Organizing Maps



Invented in 1980s by Finnish professor Teuvo Kohonen this type of Neural Network is an example of Unsupervised Learning – SOMs are used to find patterns when the outcome is unknown. They can translate high-dimensional data onto 2d maps and therefore are a powerful tool for feature extraction and dimensionality reduction.

ITEM #5

Boltzmann Machines

Boltzmann Machines (BMs) are a type of Unsupervised Neural Network. Extreme interconnectivity of neurons makes them powerful but computationally heavy. The simplified Restricted Boltzmann Machines (RBMs) are much faster and excel at feature detection making them a popular choice for recommender systems.

Join The SuperDataScience Facebook Group And Accelerate Your Career