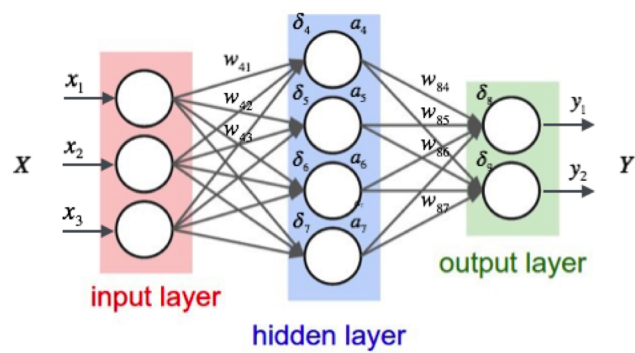
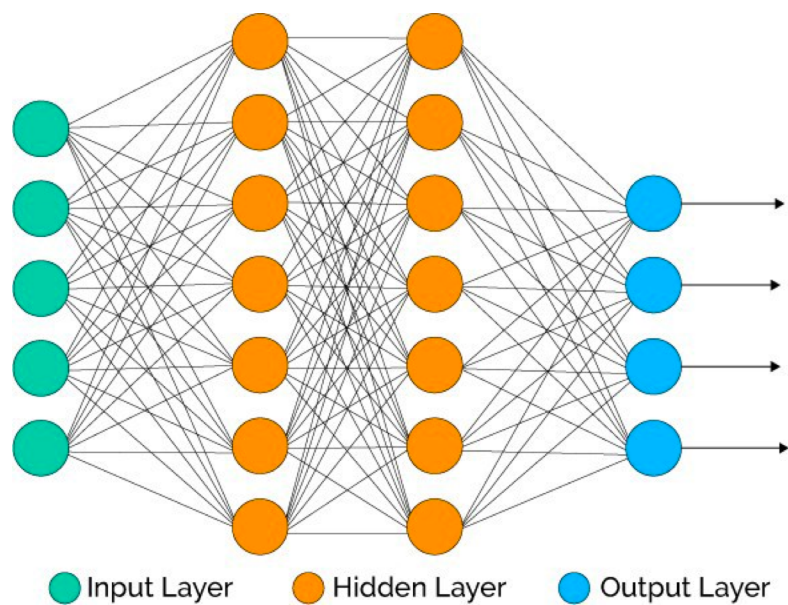
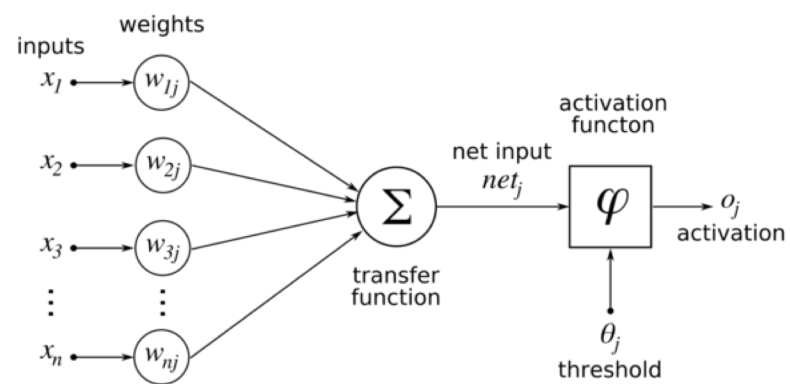
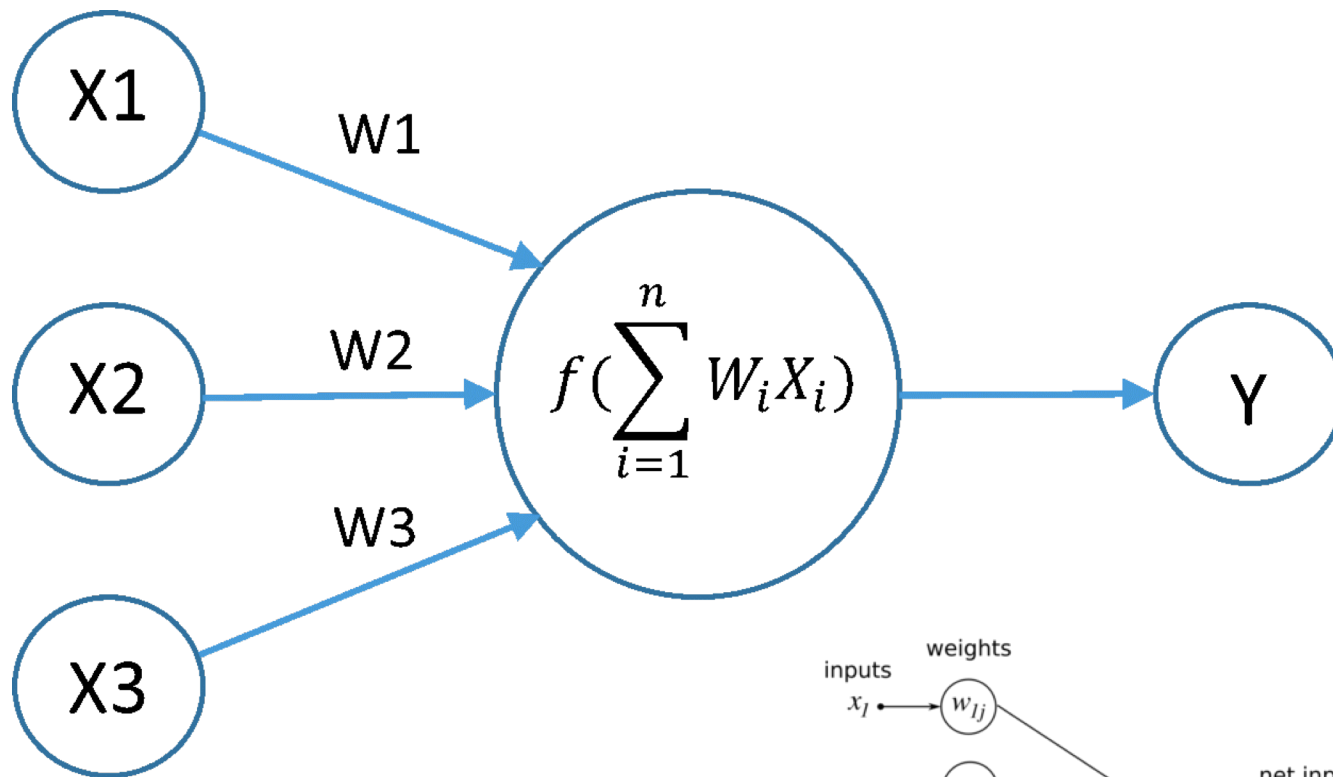


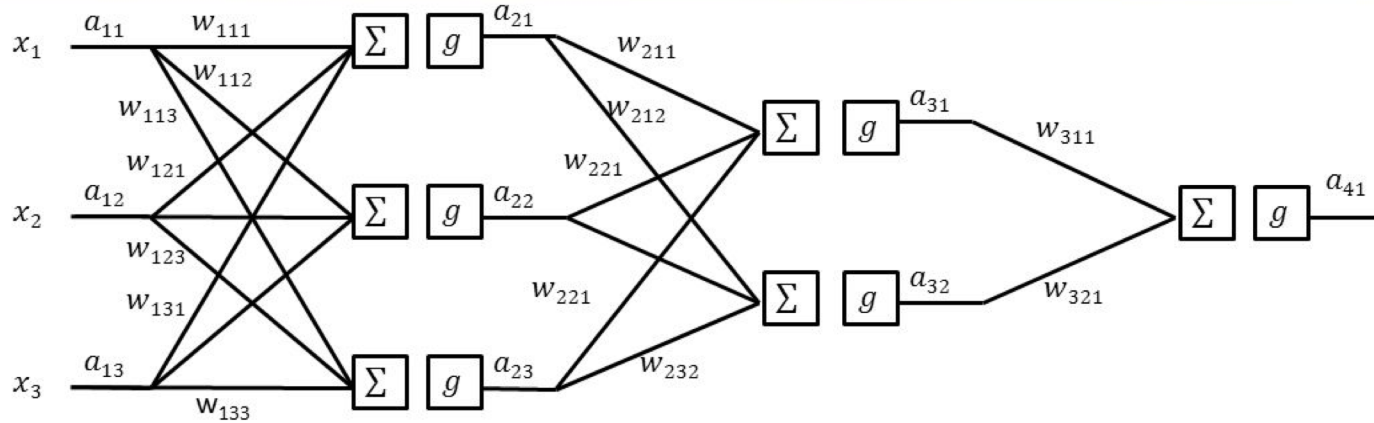
Machine Learning

- Neural Network, Deep Learning, IA, Apprentissage auto, data mining
- Algorithm: generalize from experience
- History
- Applications
- <https://playground.tensorflow.org>





Neural Network Equations



$$h_w(x) = a_{4,1}$$

$$a_{1,1} = x_1$$

$$a_{4,1} = g\left(\sum_i w_{3,i,1} a_{3,i}\right)$$

$$a_{3,1} = g\left(\sum_i w_{2,i,1} a_{2,i}\right)$$

$$a_{\ell,1} = g\left(\sum_i w_{\ell-1,i,1} a_{\ell-1,i}\right)$$

$$h_w(x) = g\left(\sum_k w_{3,k,1} g\left(\sum_j w_{2,j,k} g\left(\sum_i w_{1,i,j} x_i\right)\right)\right)$$