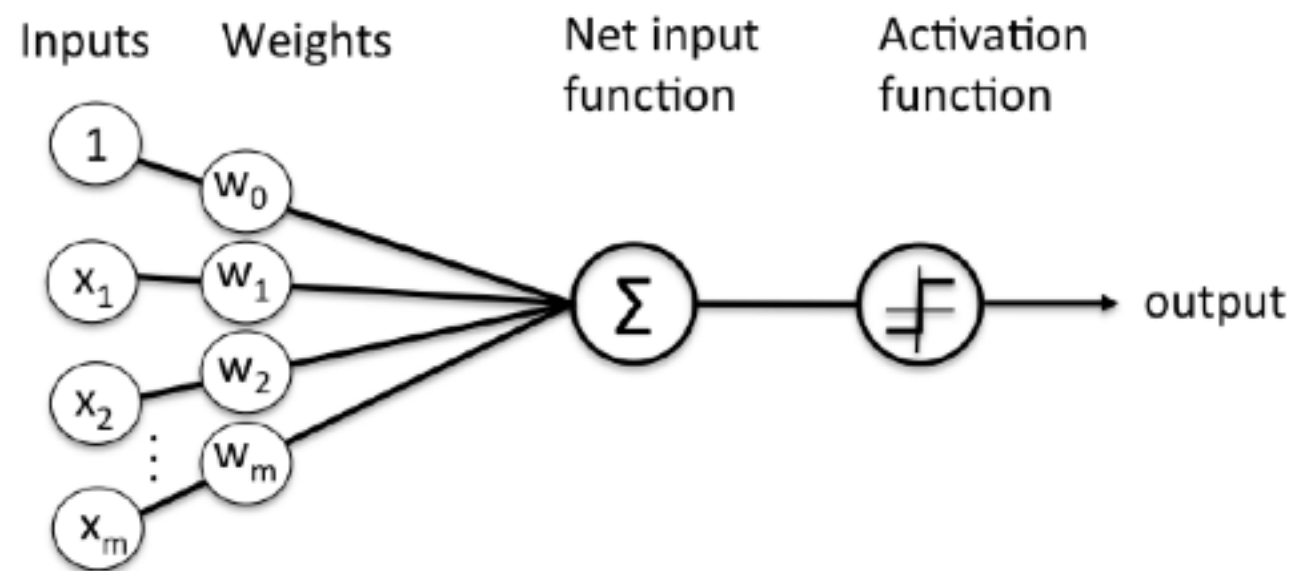


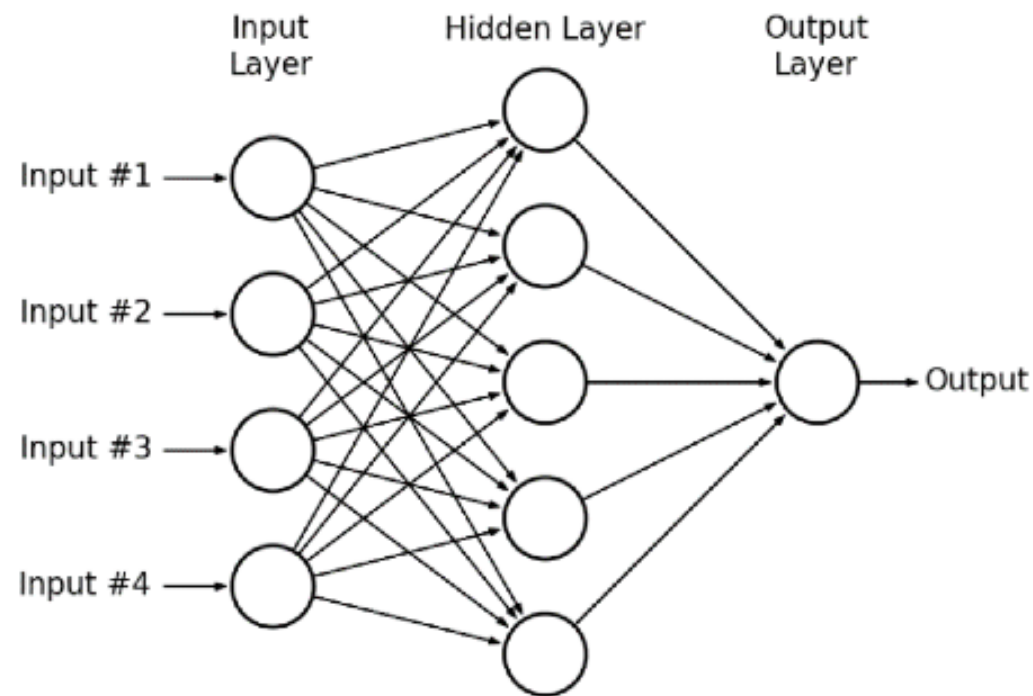
# Perceptron



The Perceptron computes a weighted sum of its inputs and then applies an activation function.

$$\hat{y} = f(w_0 + w_1x_1 + \dots + w_mx_m)$$

# Multilayer Perceptron



The Multilayer Perceptron (MLP) stacks Perceptrons in sequential layers, feeding the outputs of one layer to the inputs of the next layer. In the case of a 2 layer MLP,

$$\hat{y} = f_2 \left( w_0^2 + w_1^2 h_1 + \dots + w_{m_h}^2 h_{m_h} \right)$$

$$h = f_1 \left( w_0^1 + w_1^1 x_1 + \dots + w_m^1 x_m \right)$$