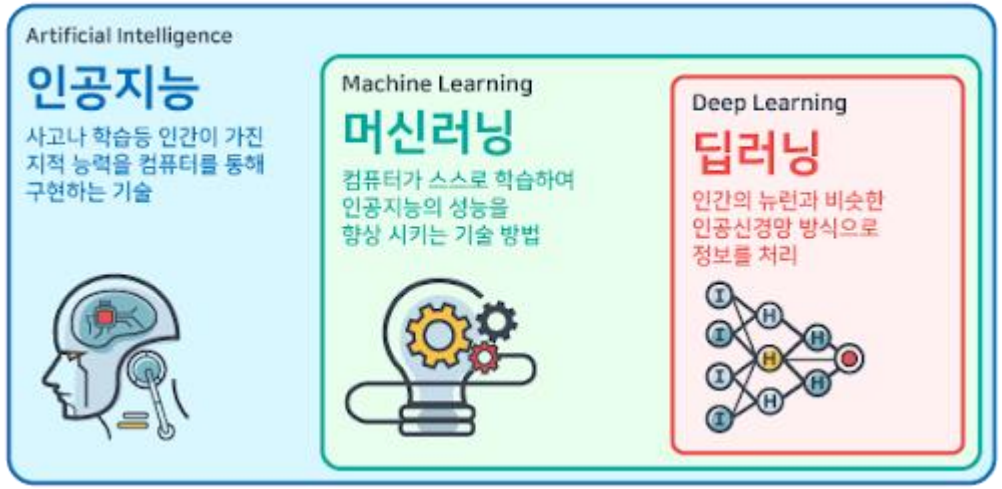
Perceptron


#nav_links {
width: 50%;
float: right;
}
#section_1{
width: 100%;
height: 500px;
box-sizing: border-box;
border: 1px solid red;
background-color: #f0f3f7;
position: relative;
}
#purple-box{
position: absolute;
width: 50%;
height: 1700px;
top: 50px;
right:0px;
border-radius:50px;
}
#other_links {
float: left;
list-style-type: none;
}
#other_links li {
display: inline;
padding: 20px;
}
#sign_in_up {
float: right;
list-style-type: none;
}
Line 27, Column 13 — 76 Lines
acer

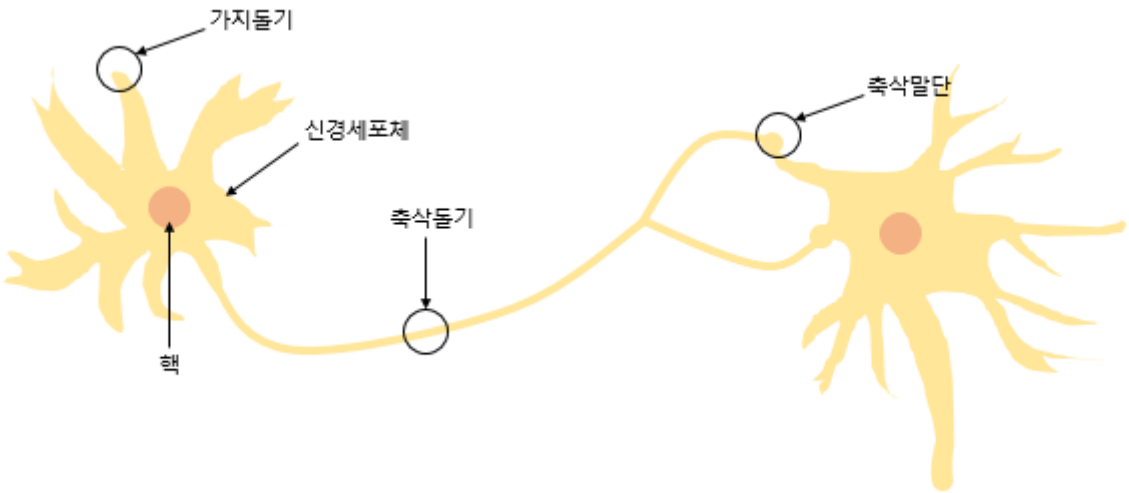
커리큘럼

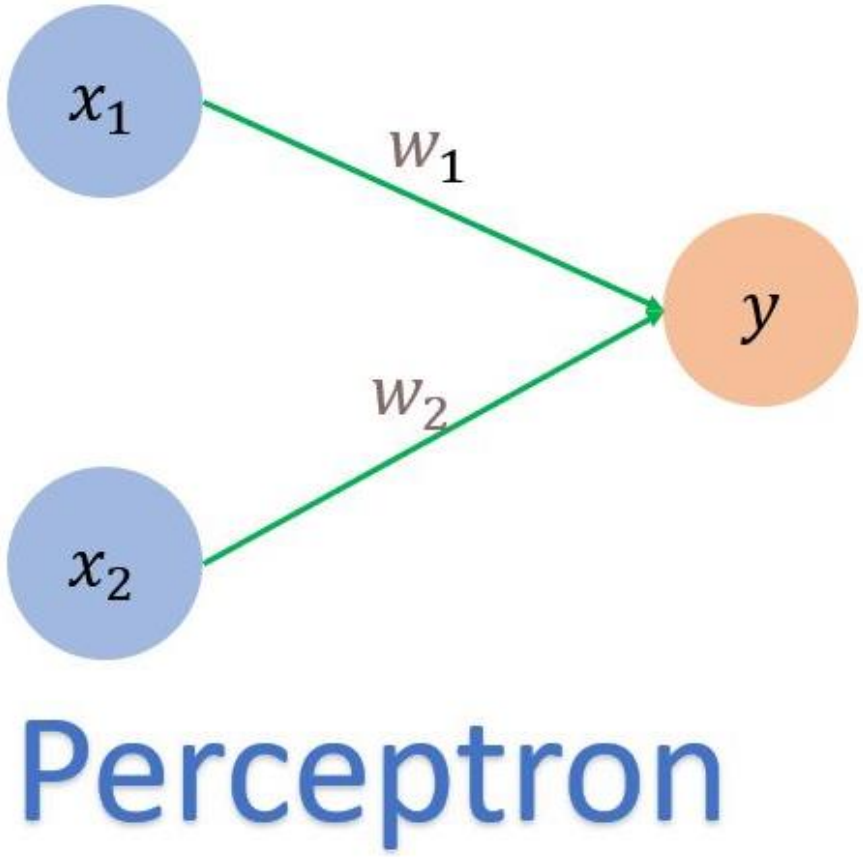
1. History of Artificial intelligence
2. Perceptron
3. Multiperceptron
4. Neural network
5. Deep Neural Network
6. Convolution Neural Network
7. Recurrent Neural Network
8. Autoencoder
9. Generative Adversarial Network



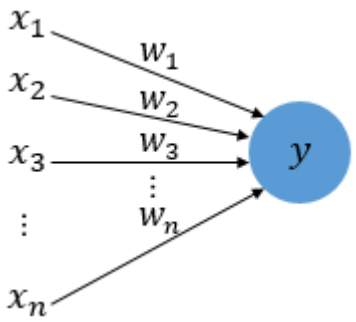
퍼셉트론이란?

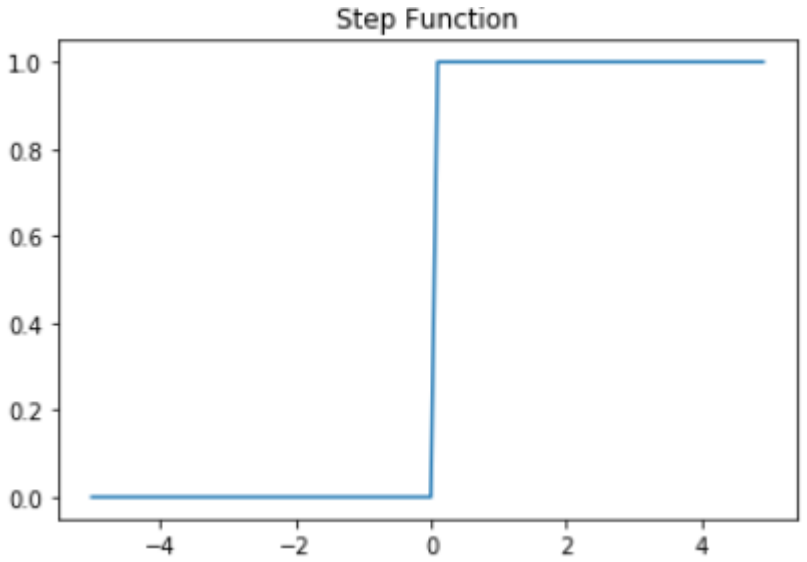
Perceptron➔ Perception + neuron





퍼셉트론이란?

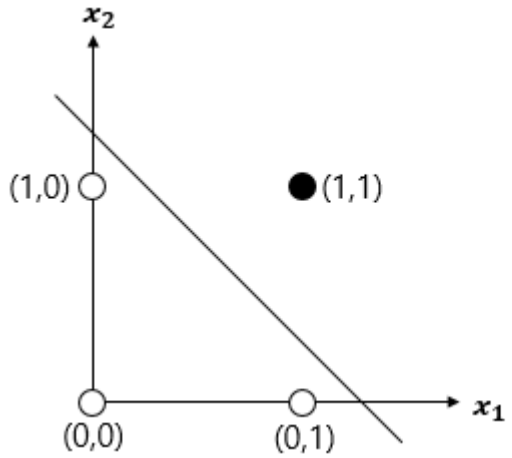




$$if \sum_{i}^{n} w_i x_i \ \geq \theta \rightarrow y = 1$$

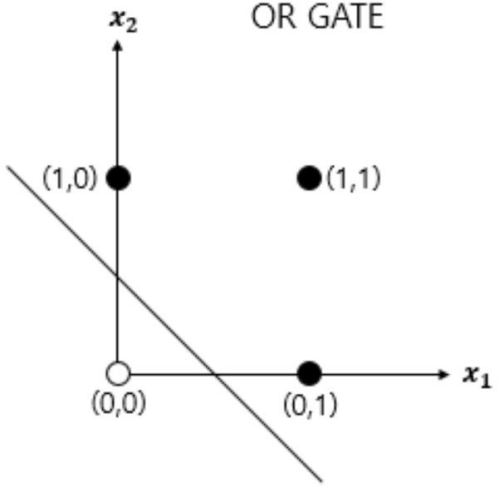
$$if \sum_{i}^{n} w_i x_i \ < \theta \rightarrow y = 0$$

퍼셉트론을 활용한 게이트 구현



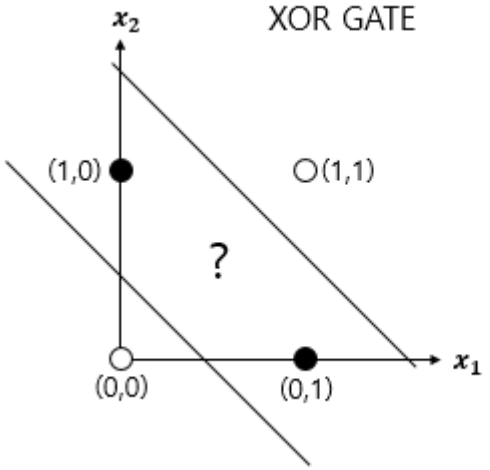
x_1	x_2	y
0	0	0
0	1	0
1	0	0
1	1	1

AND 게이트



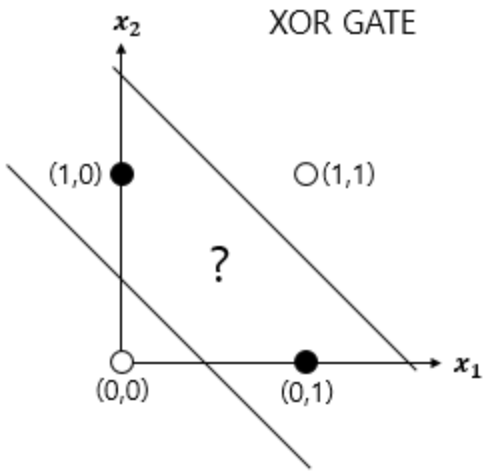
x_1	x_2	y
0	0	0
0	1	1
1	0	1
1	1	1

OR 게이트

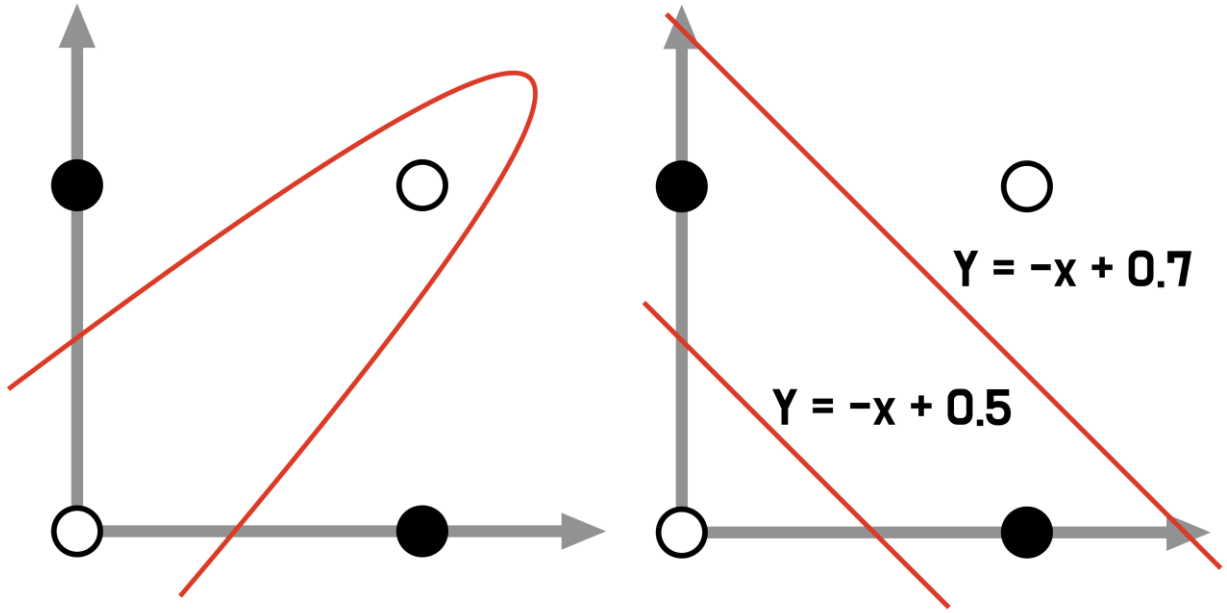


x_1	x_2	y
0	0	0
0	1	1
1	0	1
1	1	0

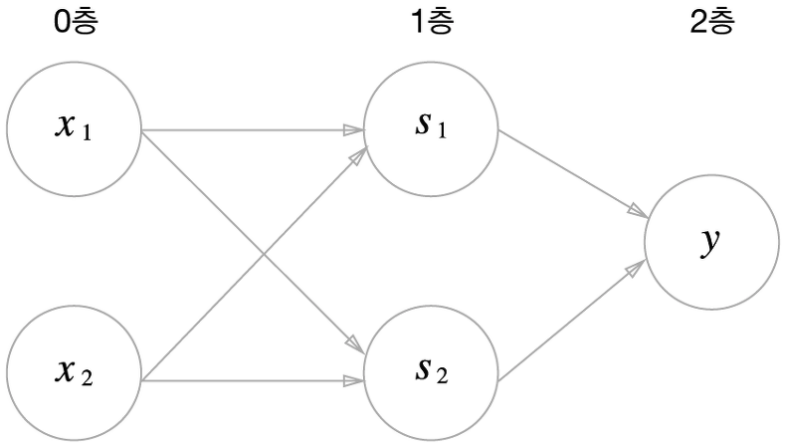
퍼셉트론의 한계

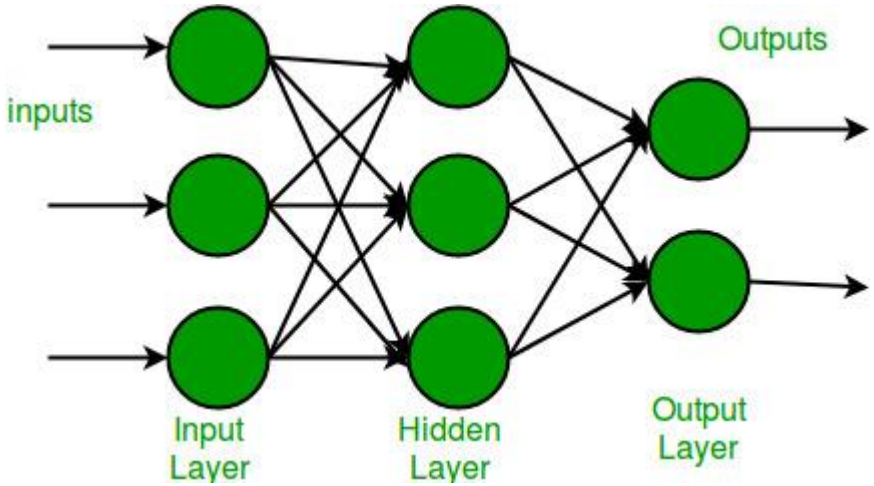


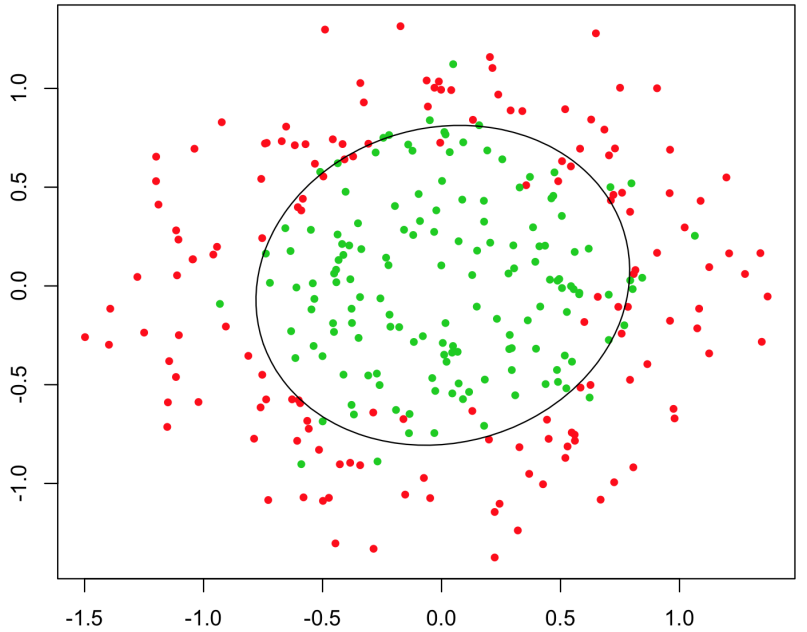
x_1	x_2	y
0	0	0
0	1	1
1	0	1
1	1	0



Multilayer perceptron





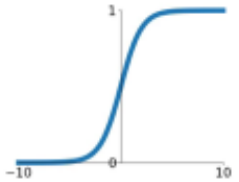


Activation function

Activation Functions

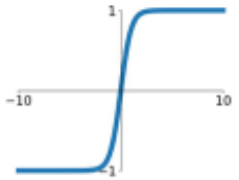
Sigmoid

$$\sigma(x) = \frac{1}{1+e^{-x}}$$



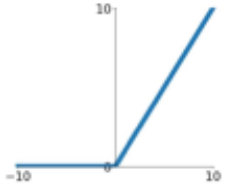
tanh

$$\tanh(x)$$



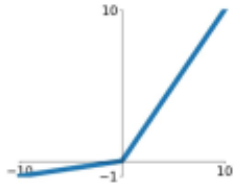
ReLU

$$\max(0, x)$$



Leaky ReLU

$$\max(0.1x, x)$$



Maxout

$$\max(w_1^T x + b_1, w_2^T x + b_2)$$

ELU

$$\begin{cases} x & x \geq 0 \\ \alpha(e^x - 1) & x < 0 \end{cases}$$