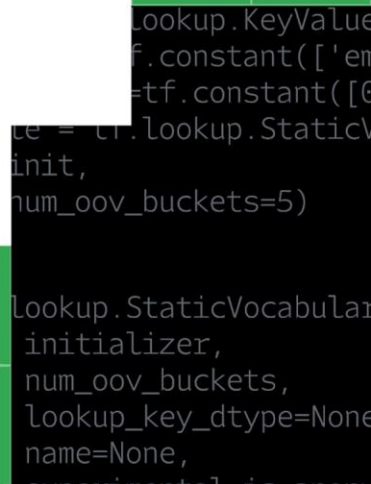
Google Developer Student Clubs

Basic 3주차 발표

김찬원



Category

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2. XOR 문제
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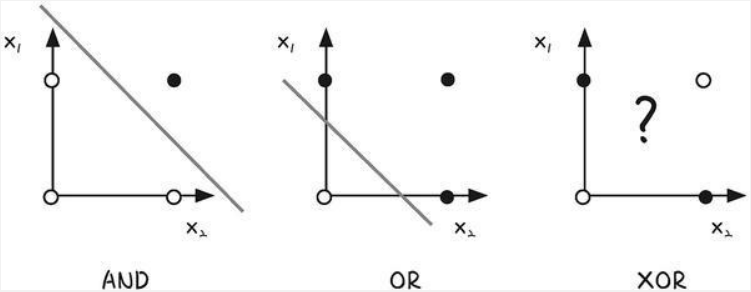
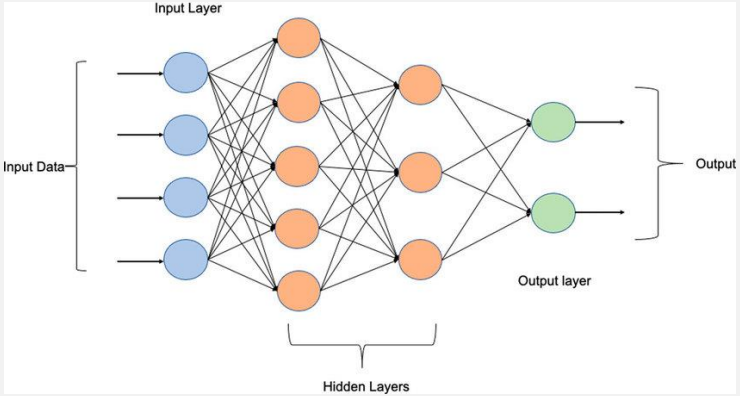
딥러닝이란?

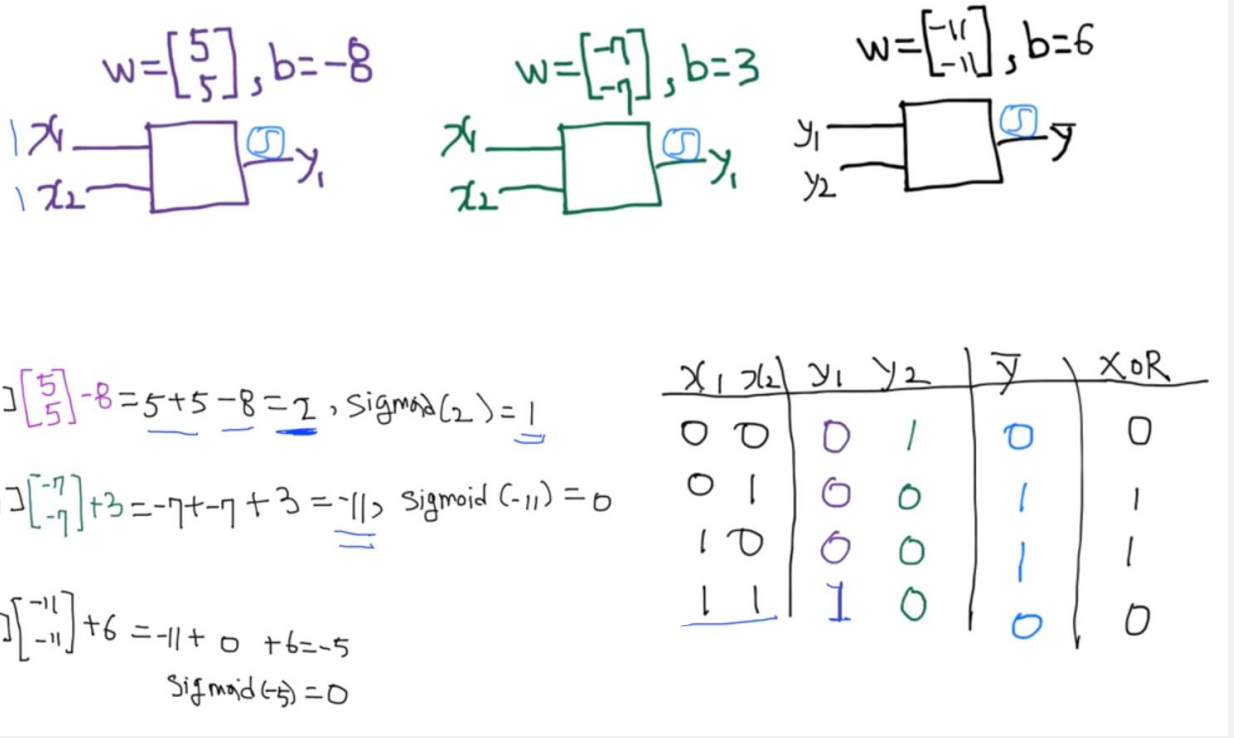
XOR 문제



Multilayer Perceptron



XOR 문제



$[1\ 1]\begin{bmatrix}5\\5\end{bmatrix}-8=5+5-8=2$, Sigmoid(2) = 1

$[1\ 1]\begin{bmatrix}-7\\-7\end{bmatrix}+3=-7-7+3=-11$, Sigmoid(-11) = 0

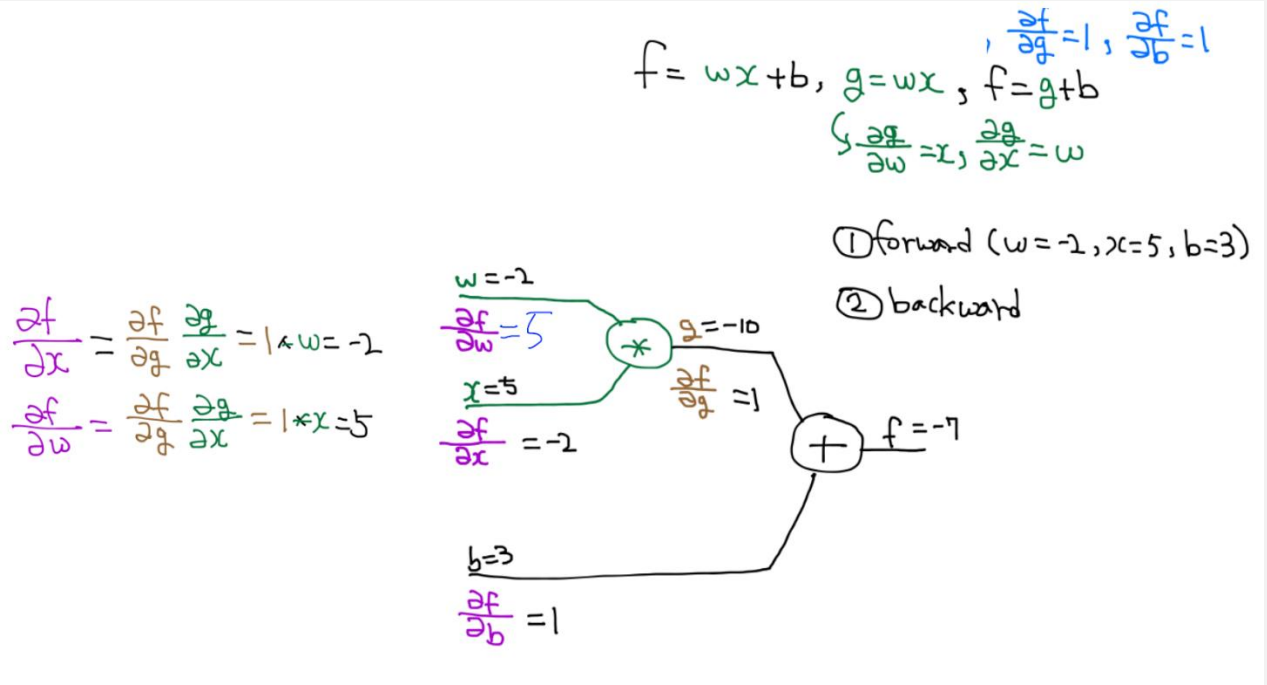
$[1\ 0]\begin{bmatrix}-11\\-11\end{bmatrix}+6=-11+0+6=-5$

Sigmoid(-5) = 0

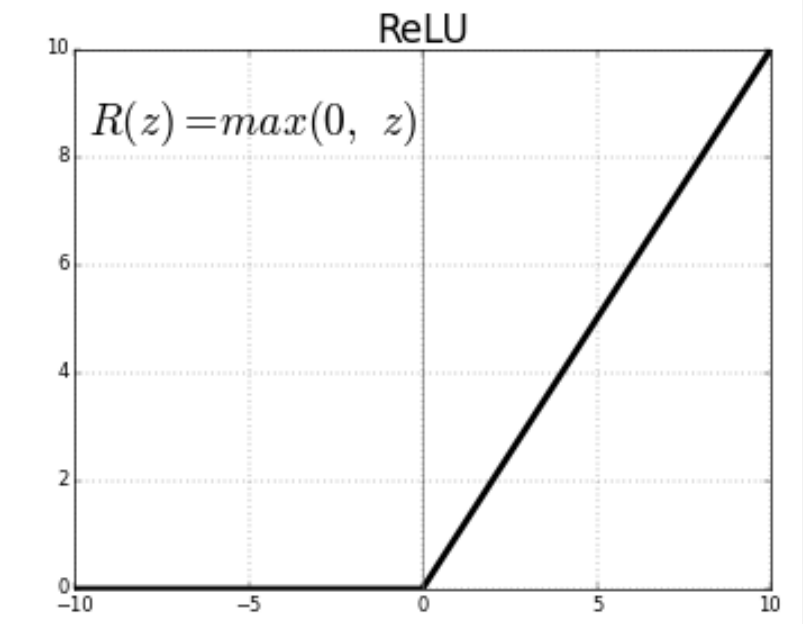
x_1	x_2	y_1	y_2	y	XOR
0	0	0	1	0	0
0	1	0	0	1	1
1	0	0	0	1	1
1	1	1	0	0	0

XOR 문제

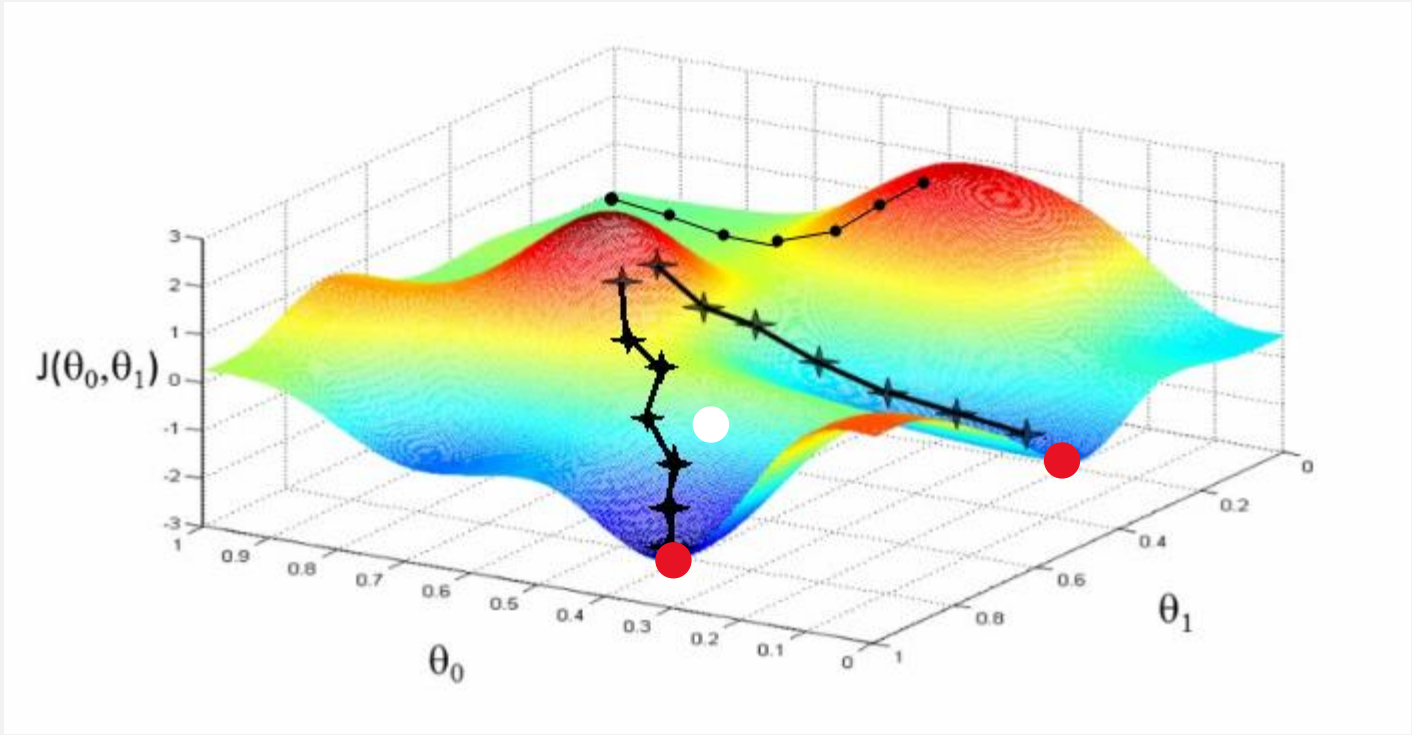
$$K(x) = sigmoid(XW_1 + B_1) \qquad \bar{Y} = H(x) = sigmoid\, K(x)W_2 + B_2$$



ReLU 함수

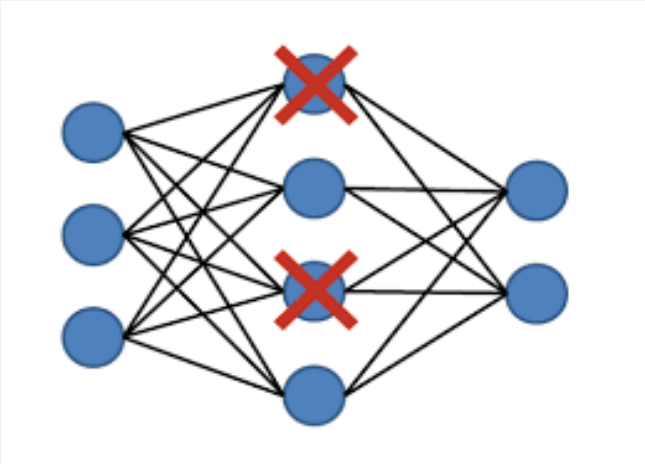


Weight Initialization

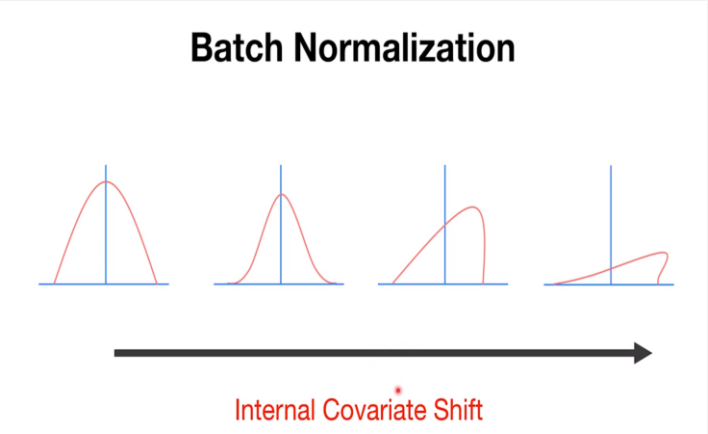


Dropout & Batch Normalization

Dropout



Batch Normalization



추가적인 내용

tf .concat 함수

```
tf.concat(
    values, axis, name='concat'
)
```

t1 = [[1, 2, 3], [4, 5, 6]]
t2 = [[7, 8, 9], [10, 11, 12]]

t1

1	2	3
4	5	6

t2

7	8	9
10	11	12

tf.concat([t1, t2], 0)

1	2	3
4	5	6
7	8	9
10	11	12

tf.concat([t1, t2], 1)

1	2	3	7	8	9
4	5	6	10	11	12