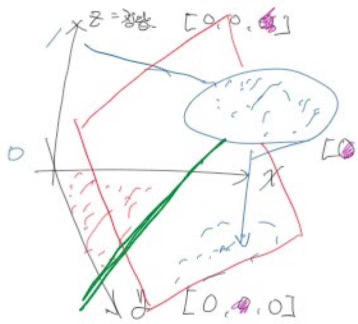
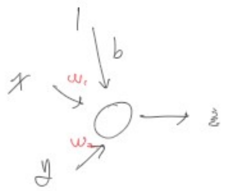
2020년 10월 21일 수요일 오전 8:31





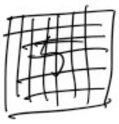
$w_1 \cdot x + w_2 \cdot y + b = z$

$w_1 \cdot x + w_2 \cdot y = -b$

시각 → 의미?

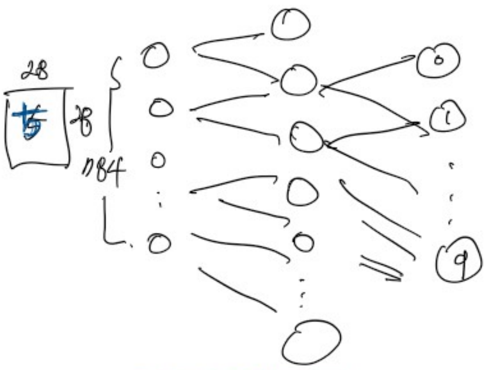
1 2 3 4 5

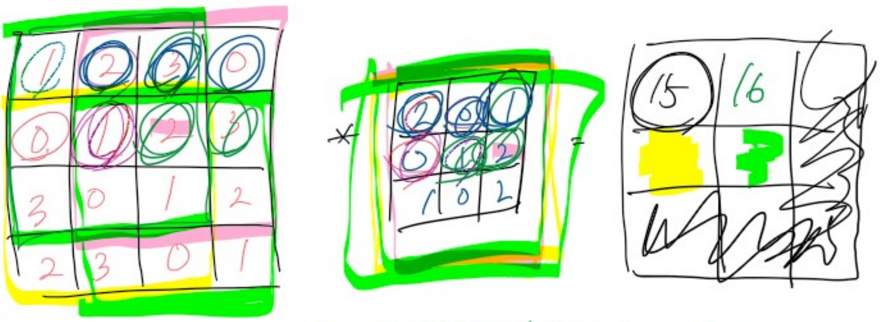
기계? → 픽셀.



위치 → 픽셀의 위치가 달라짐 ⇒ 위상

크기 → 〃 (위치 + 상태)





$1 \times 2 + 2 \times 0 + 3 \times 1 + 0 \times 0 + 1 \times 1 + 2 \times 2$

$+ 3 \times 1 + 0 \times 0 + 1 \times 2 = 15$

$= 16$

1D Convolution.

$x_0, x_1, \cdots, x_{N-1}$

⊛

w_0, w_1, w_2, b_1

$\Rightarrow y_0 = w_0 x_0 + w_1 x_1 + w_2 x_2 + b_1$

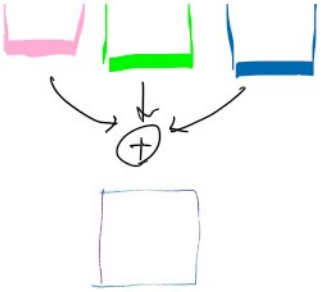
$y_1 = w_0 x_1 + w_1 x_2 + w_2 x_3 + b_1$

2D Convolution.

$\Rightarrow y_0 = w_0x_0 + w_1x_1 + w_2x_2 + b_1$

$y_1 = w_0x_1 + w_1x_2 + w_2x_3 + b_1$

$y_{N-3} = w_0x_{N-3} + w_1x_{N-2} + w_2x_{N-1} + b_1$



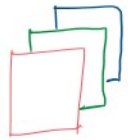
※ Convolution 계층의 역할.

- input data * kernel → feature 추출 → feature map.
  - → feature map 에 pooling 계층 통과. → 이미지축소.

Image → conv → Relu → pooling → conv → Relu → pooling ...

→ flatten → Softmax → 분류.

Affine



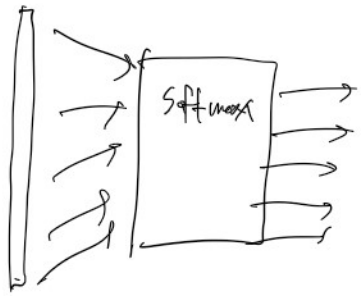
39x39x3

filter: 3x3
str: 1
filter: 10

20x37x10

filter 3x3
str: 2
filters: 20

200



① 20개
② 3개
③ 10개
④ 15개

正IF