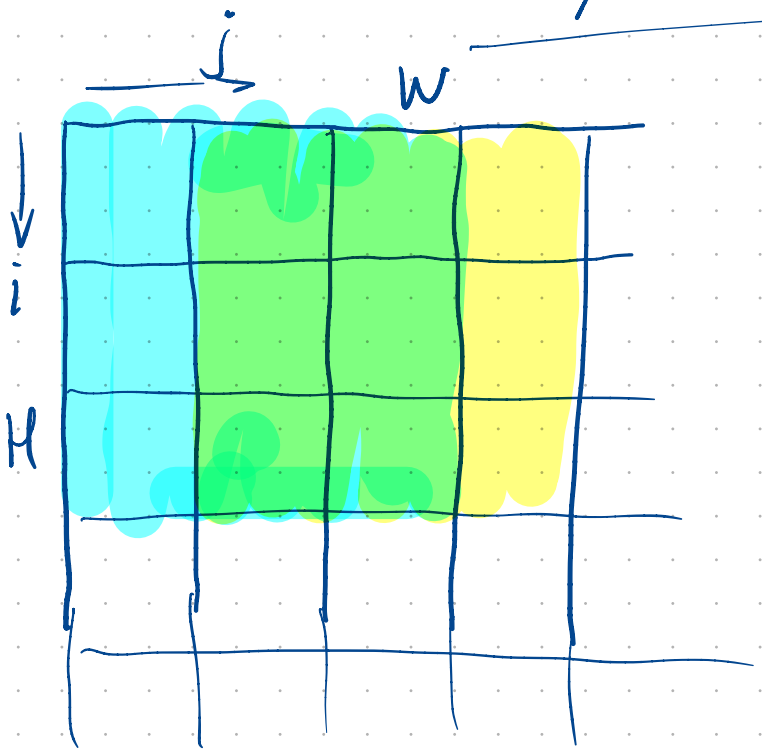
Свёрточные ИНС

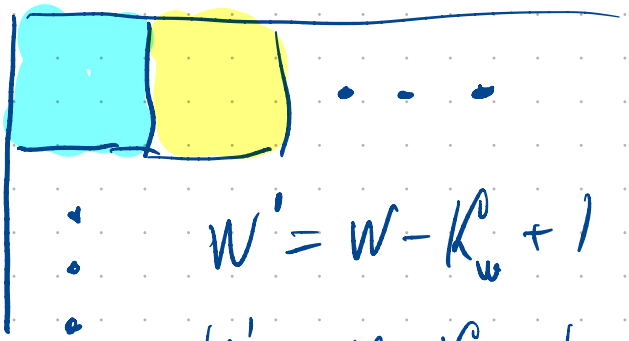


K (ечпеі) ядро

K_H

1	-2	0,7
0,5	0,3	2
1	0	-0,1

K_W



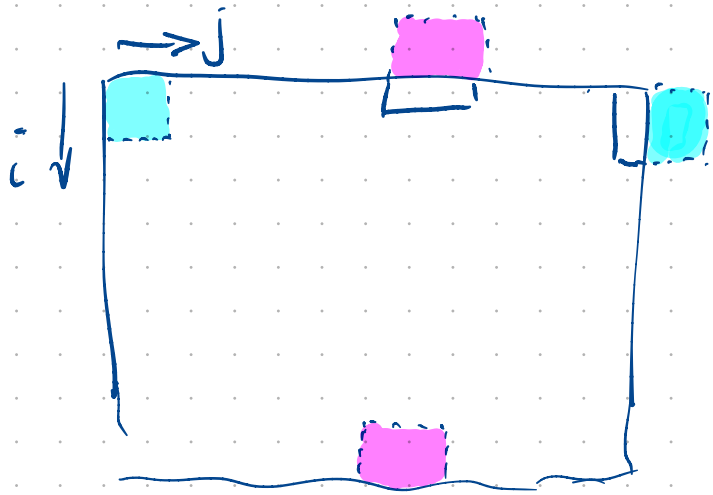
$$W' = W - K_W + 1$$

$$H' = H - K_H + 1$$

$$F(x) = \int_{-\infty}^{+\infty} f(x)\, K(x-\tau)\, d\tau$$

$$F_{ij} = \sum_{k=1}^{3} \sum_{l=1}^{3} f_{i+k,\, j+l} \cdot K_{k,l}$$

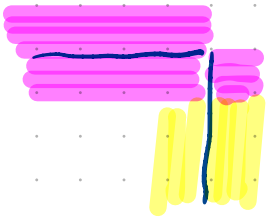
Padding/дополнение данных на краях



Циклический

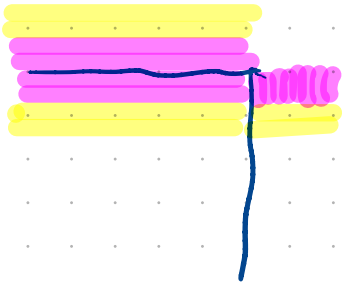
Padding

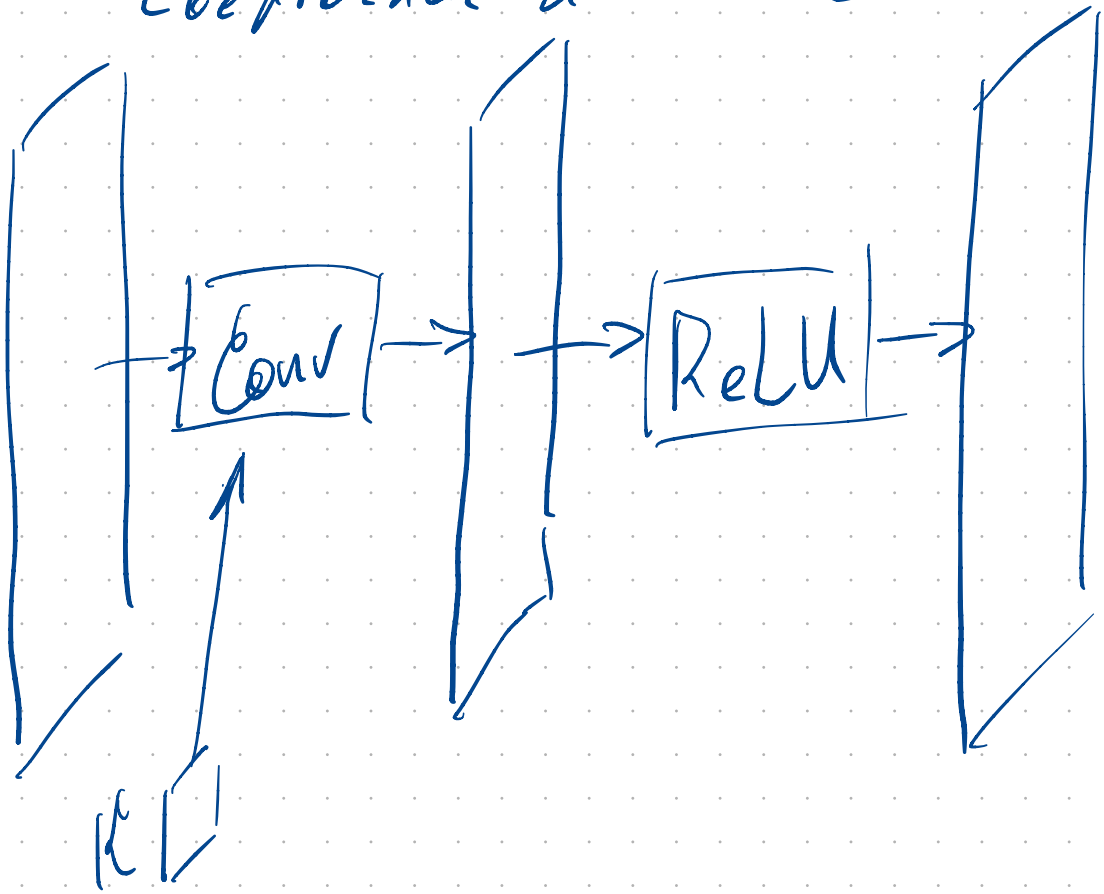
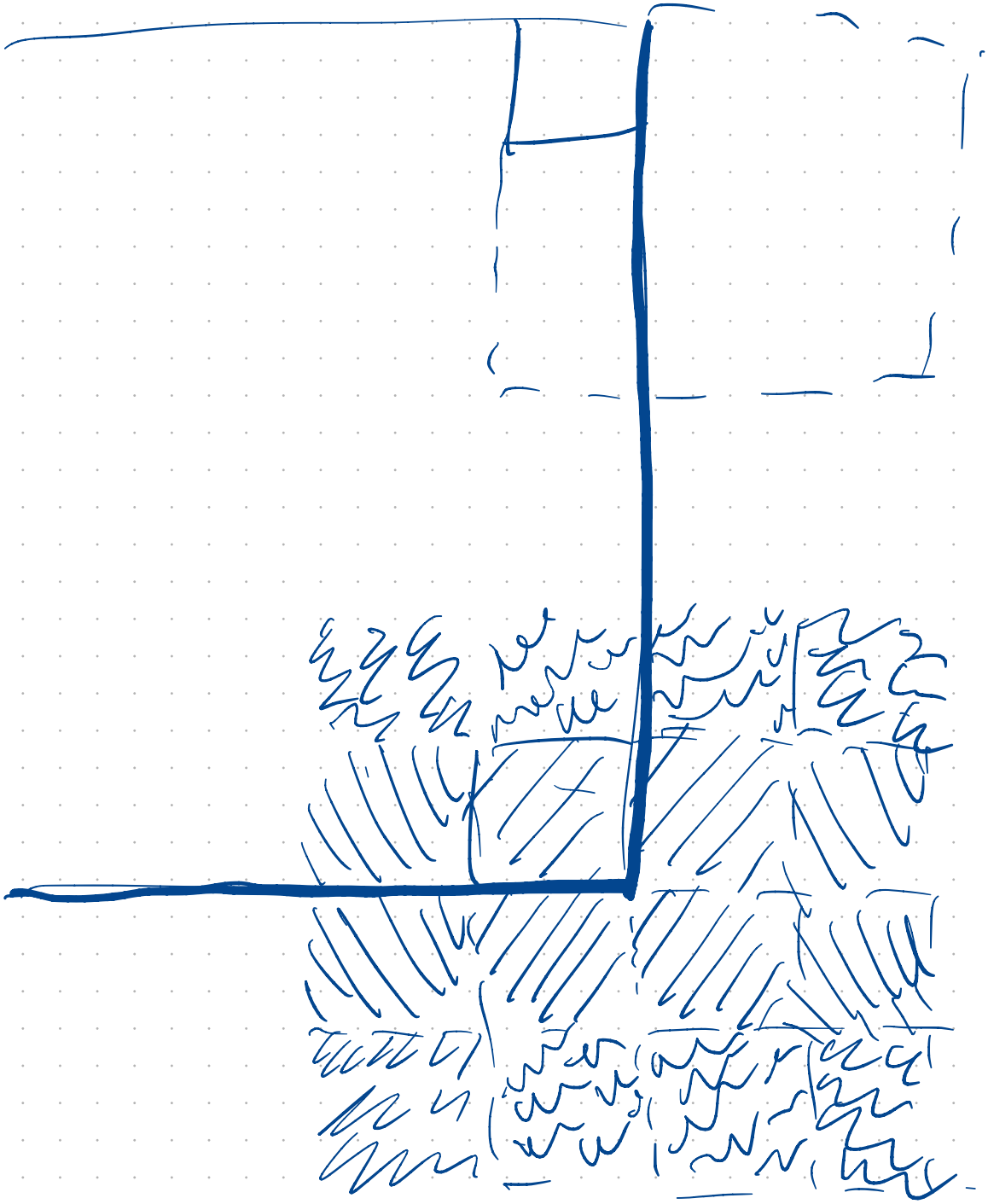
zero



const

mirror



cycle

Свёрточная НС – Convolutional NN / CNN