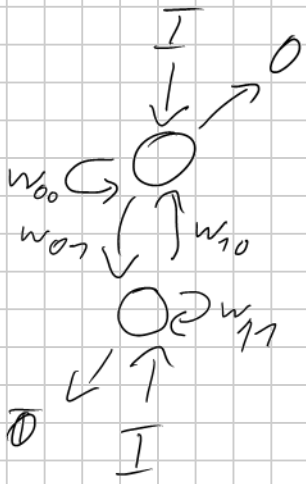
NN-Systems:

$$M_w = \begin{pmatrix} X & IO_1 & IO_2 \\ B_1 & w_{00} & w_{01} \\ B_2 & w_{10} & w_{11} \end{pmatrix}$$

Pic:

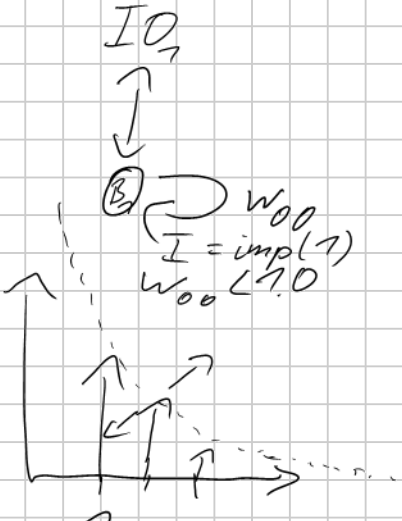


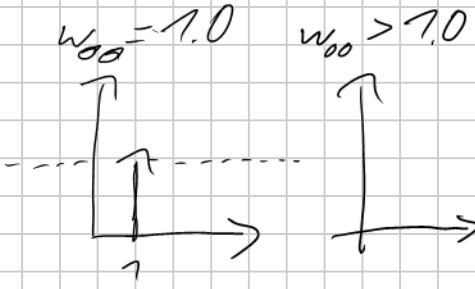
$$M_w = \begin{pmatrix} X & IO_1 \\ B_1 & w_{00} \end{pmatrix}$$

$I \rightarrow B_1 = IO_1 \cdot w_{00}$

$O \leftarrow IO_1 = B_1$

$w_{00} < 1.0$





$$B_{n+1} = (B_n + I_n) \cdot w_n$$

$C_1 C_2 C_3$

Impulse Response: $f(t) = f(imp(t-1))$ w is const

$f(1) = 1 = imp(t-1)$

$f(2) = imp(t-1) \cdot w$

$f(3) = imp(t-1) \cdot w \cdot w$

$f(n) = imp(t-1)\, w^{n-1}$

Expansion: $f(n) = f(n)\, w^{n-1}$

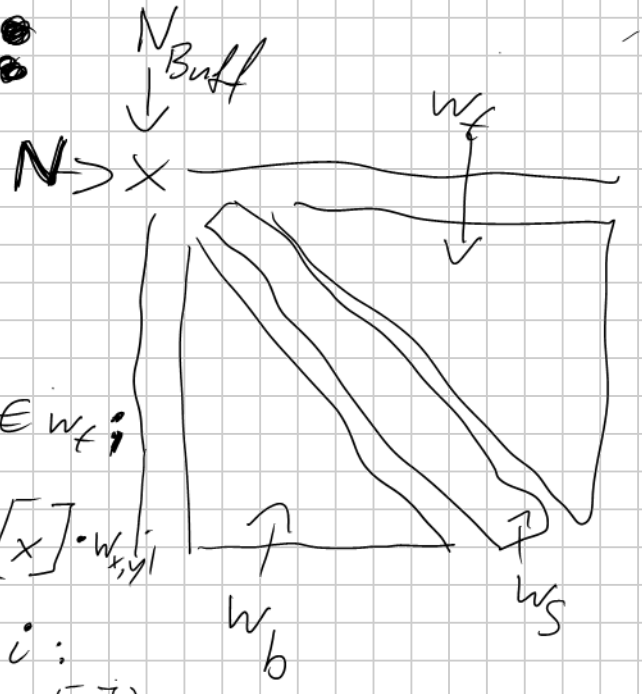
$I \rightarrow$ (B) $\rightarrow O$ (w)

$E_{o_n} = O_{Desired_n} - O_{calc_n}$ w is variable

$w_{n+1} = \frac{1}{E_{on}}$

Feed forward:

$w_{forward}$
$w_{backward}$
w_{self}
Neuron Activation



Forward Pass:

for each Pixel $\in w_f$:
x, y:
$N_{Buff}[y] \mathrel{+}= N[x] \cdot w_{x,y,i}$

for each N_{Buff}; i:
$N[i] = f(N_{Buff}[i])$;

clear N_{Buff};

:

for each Pixel $\in w_f$