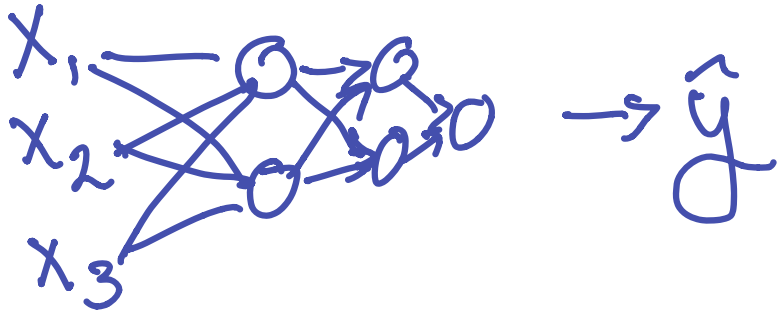
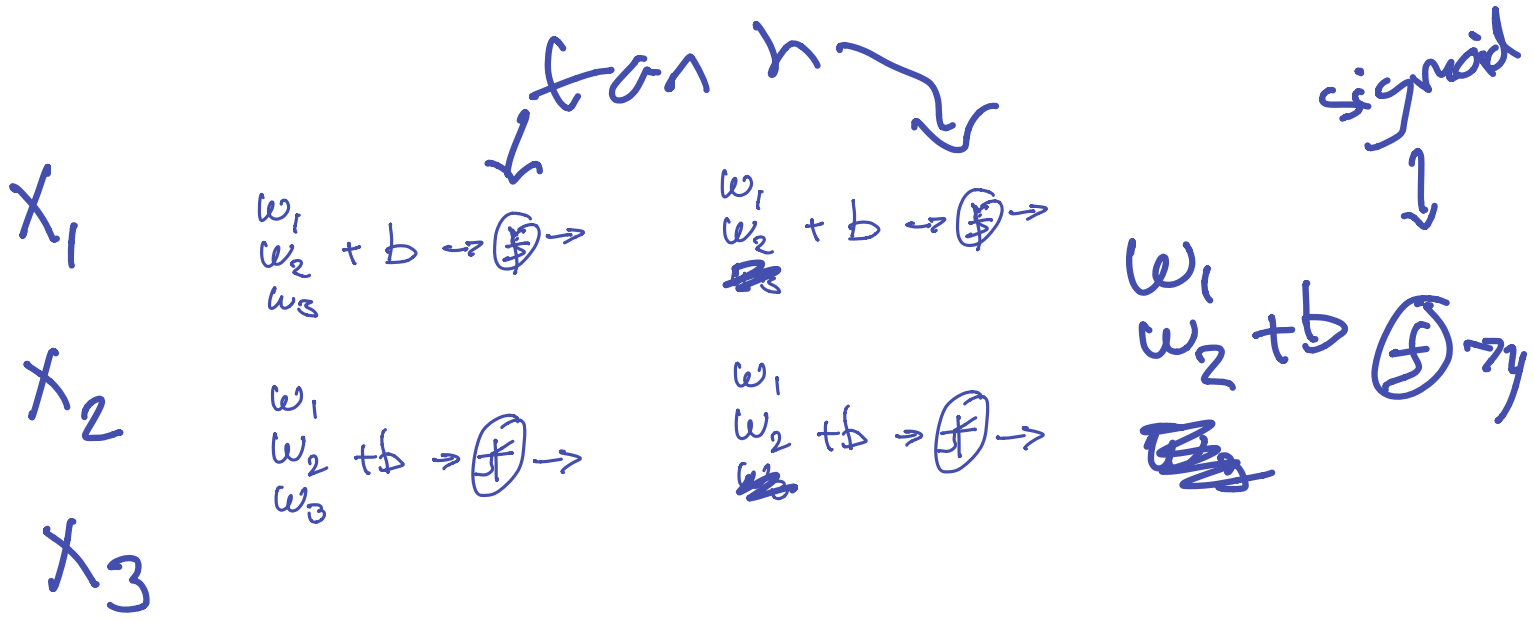
Thinking of an example

Artificial Neural network



x_1	3	5	12	1	9	Temp
x_2	1	0	1	0	1	Sun?
x_3	2	12	3	17	2	Wind m/s
y	No	No	Yes	No	Yes	Beautiful Spring Day

Note: add vectorization at end for those who know



1	1	10	0	+5	5	5	+1	
2	-3	0	1	+5	1	3	-3	
3								

0.5 +- 0.1
0.5

OBS: Rare that w's are 0, 1

Usually values vary more, let's keep it simple

$1 \cdot 3 + 10 \cdot 1 + 0 \cdot 2 + 5 = 18 \rightarrow \oplus \rightarrow 1$

$-3 \cdot 3 + 0 \cdot 1 + 1 \cdot 2 + 5 = 1 \rightarrow 0.76$

$5 \cdot 1 + 5 \cdot 0.76 + 1 = 9.8 \rightarrow 0.99$

$1 \cdot 1 + 3 \cdot 0.76 + -3 = 0.28 \rightarrow 0.27$

$0.5 \cdot 0.99 + 0.27 \cdot 0.5 - 0.1 = 0.53$

$0.53 \rightarrow \oplus \rightarrow 0.63$

$0.63 \geq 0.5 \rightarrow 1$ yes

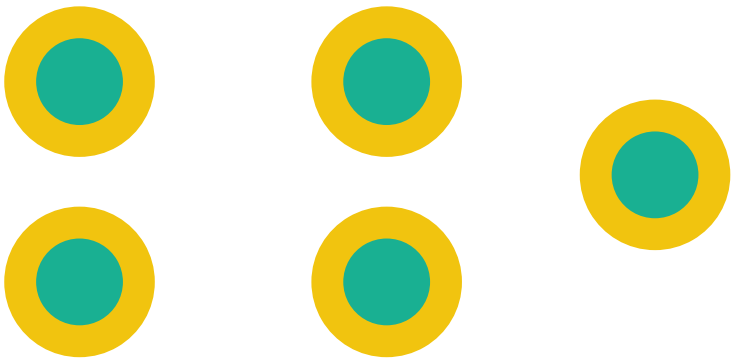
it's a beautiful spring day

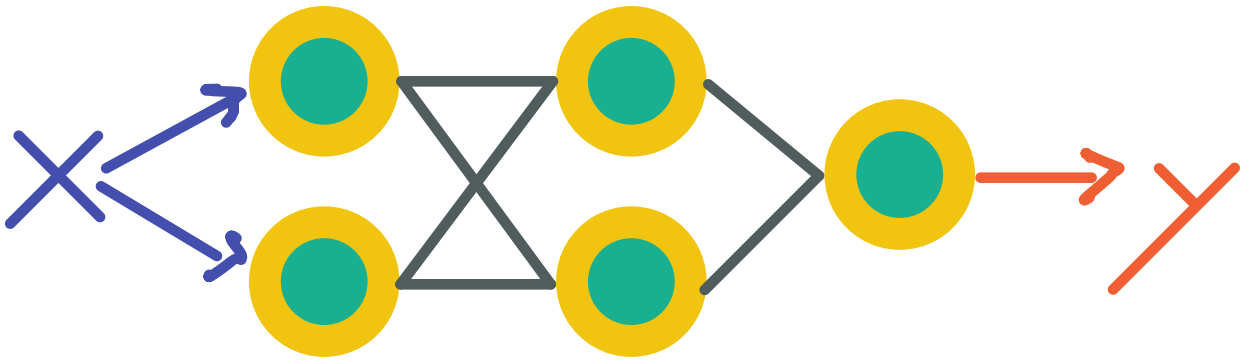
This is wrong

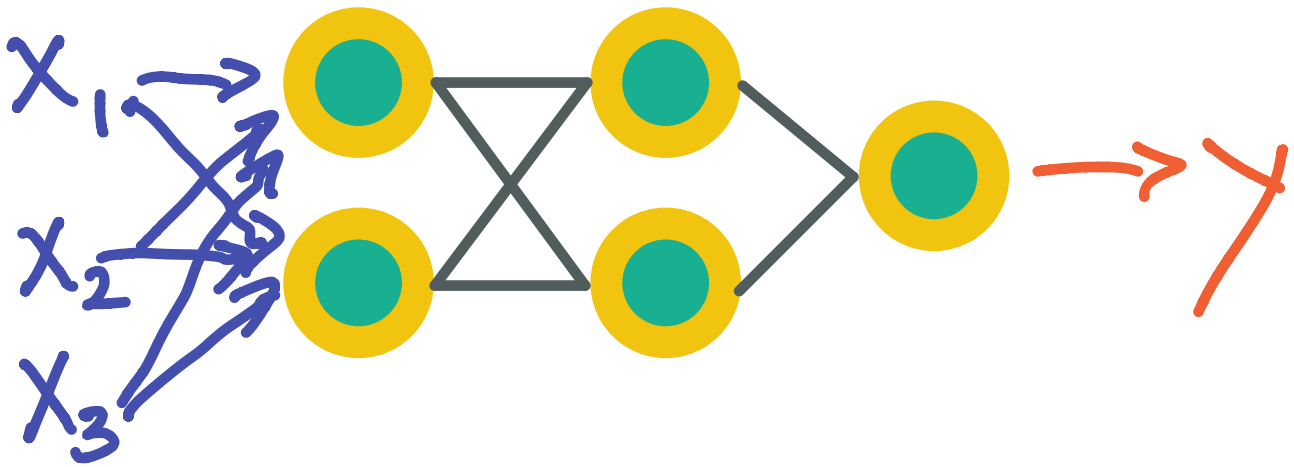
Loss function

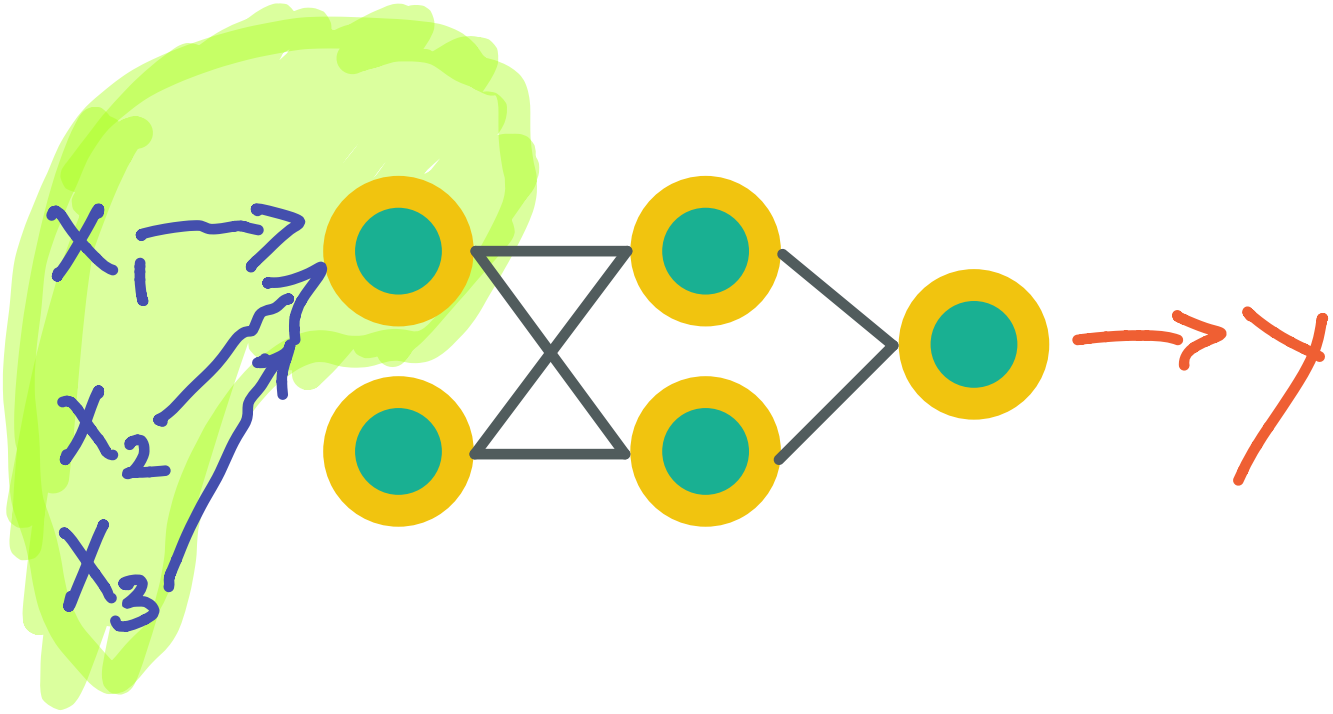
Hun funkar det med ~~[illegible]~~ Upprat?

Kommer de att köra i notebook eller via terminal?




X
Y


X1
X2
X3
Y



$$w_1x_1 + w_2x_2 + w_3x_3 + b \rightarrow p \rightarrow \tanh \rightarrow z$$