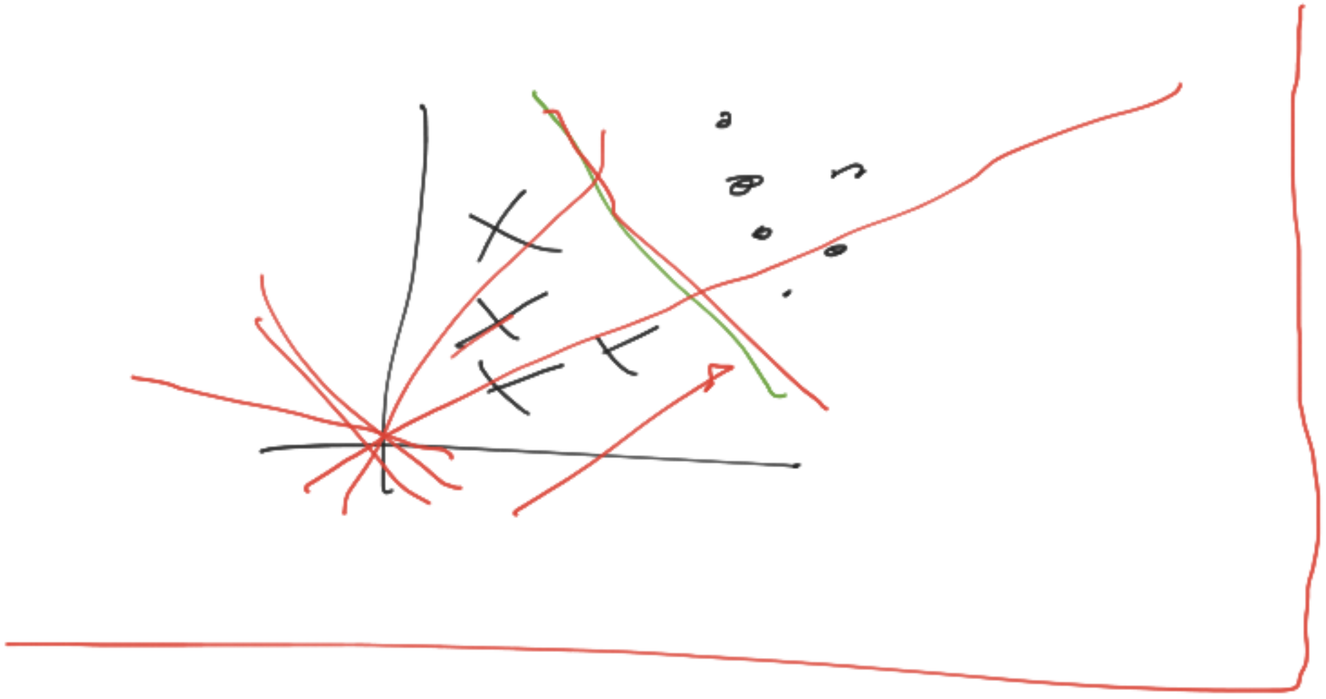
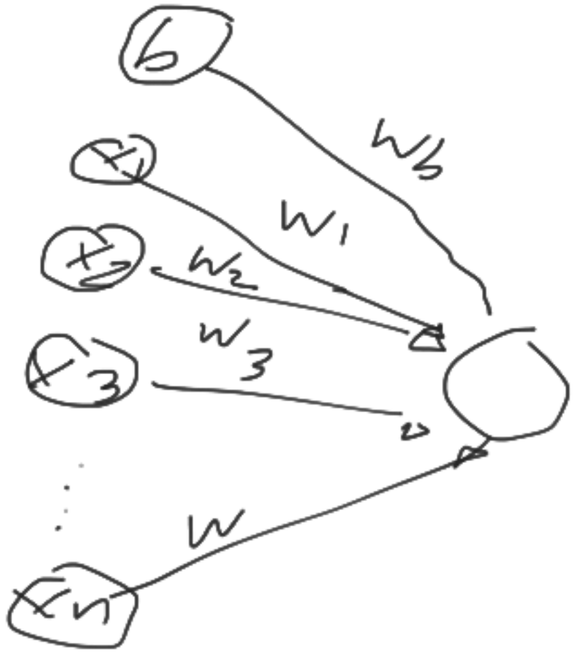
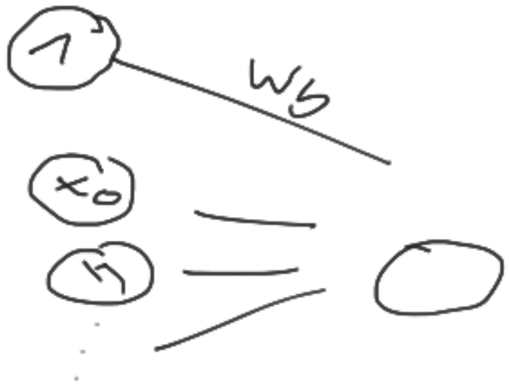
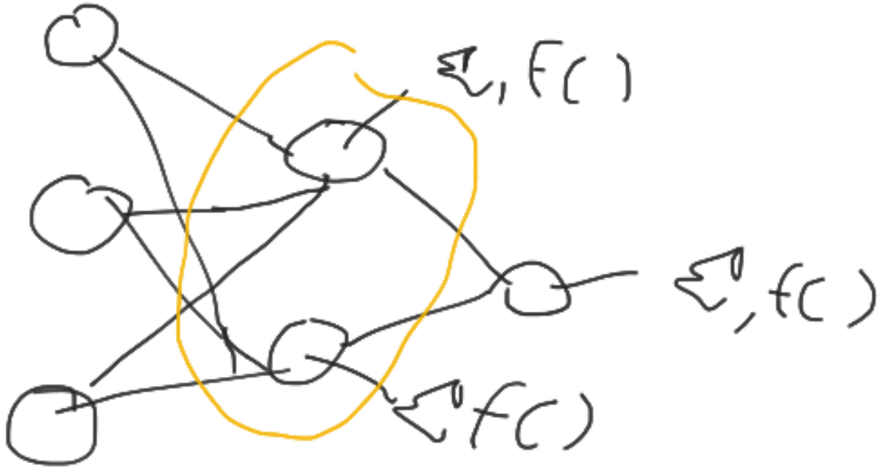
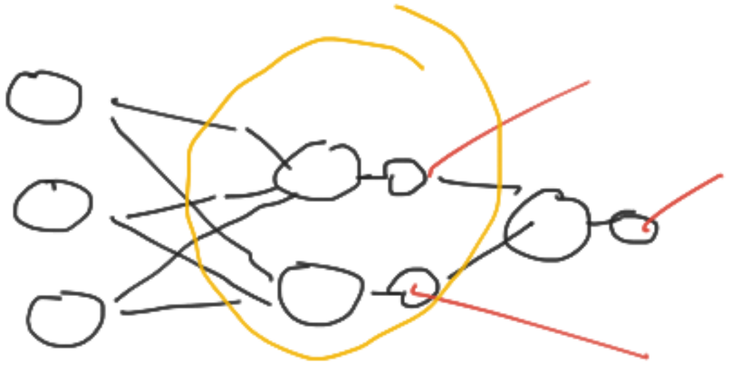


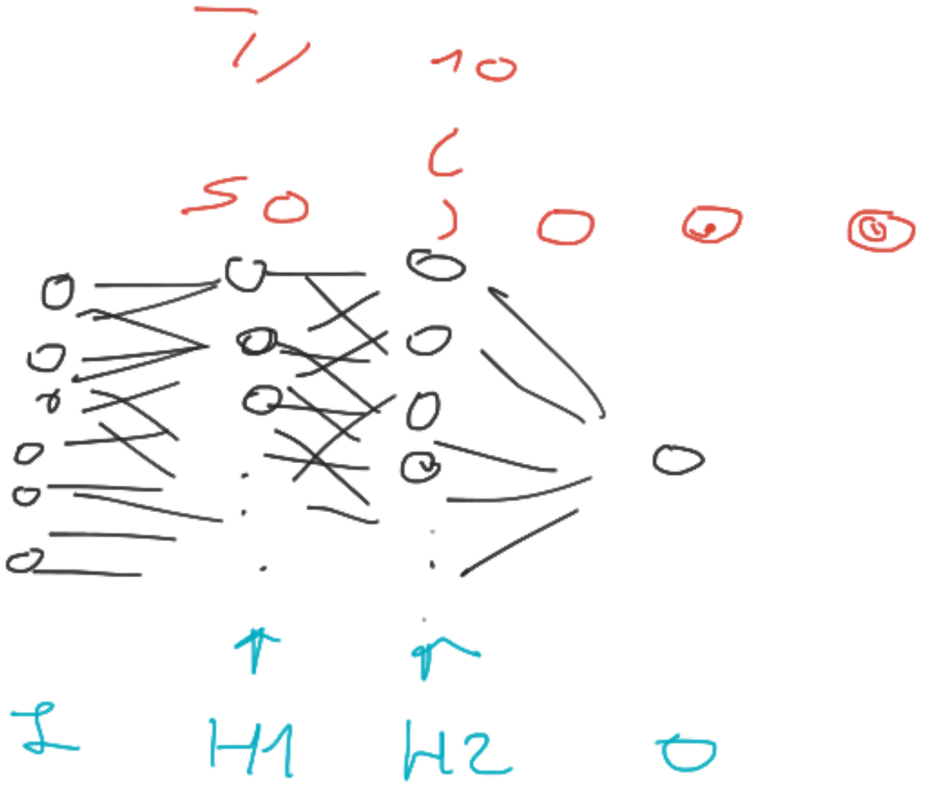

b
w_b
x_1
w_1
x_2
w_2
w_3
x_3
w
x_n

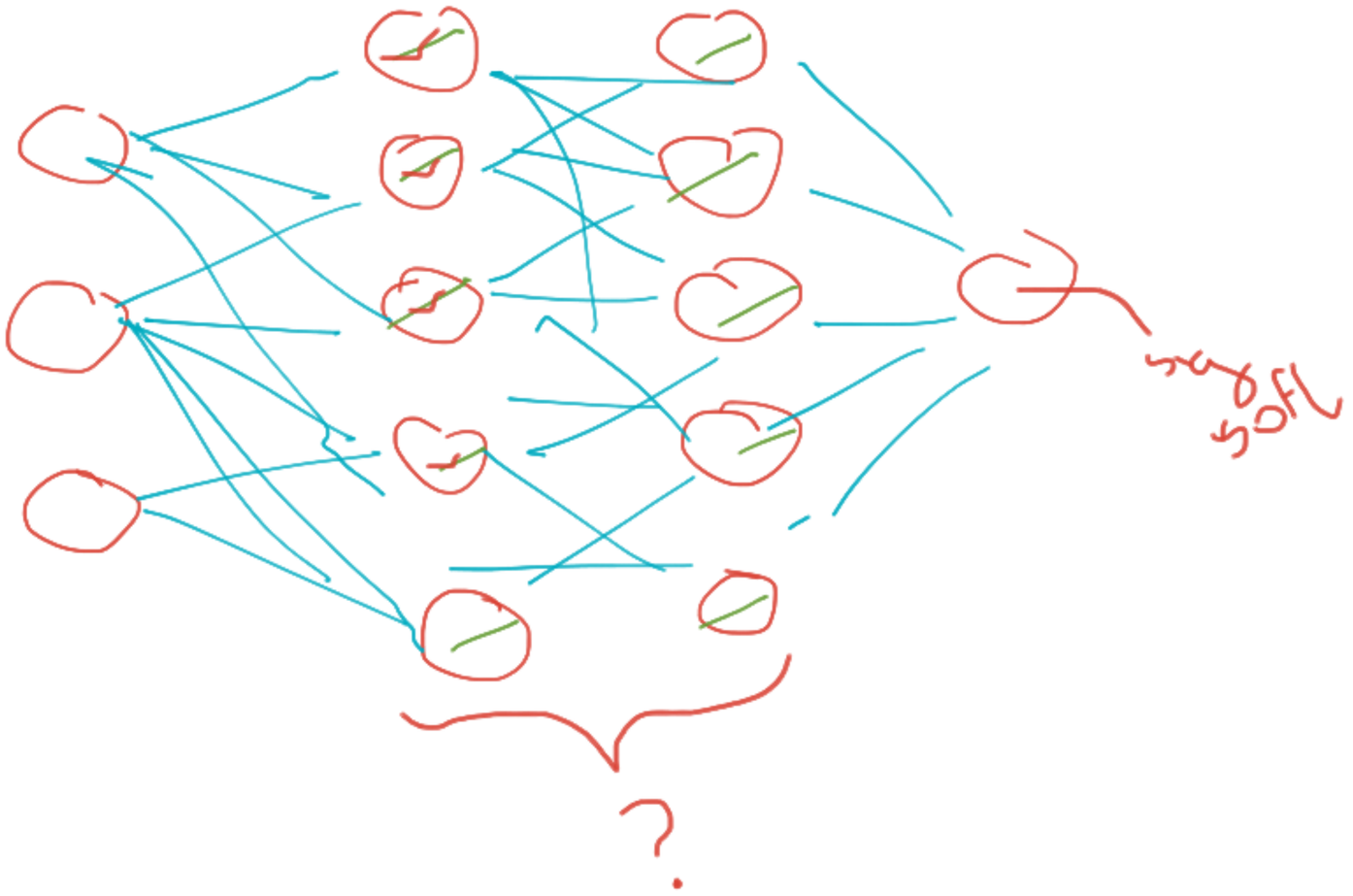

x_0
x_1
+b

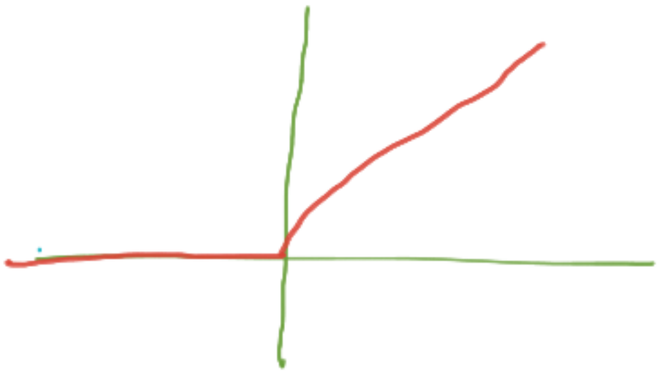

1
w_b
x_0
x_1

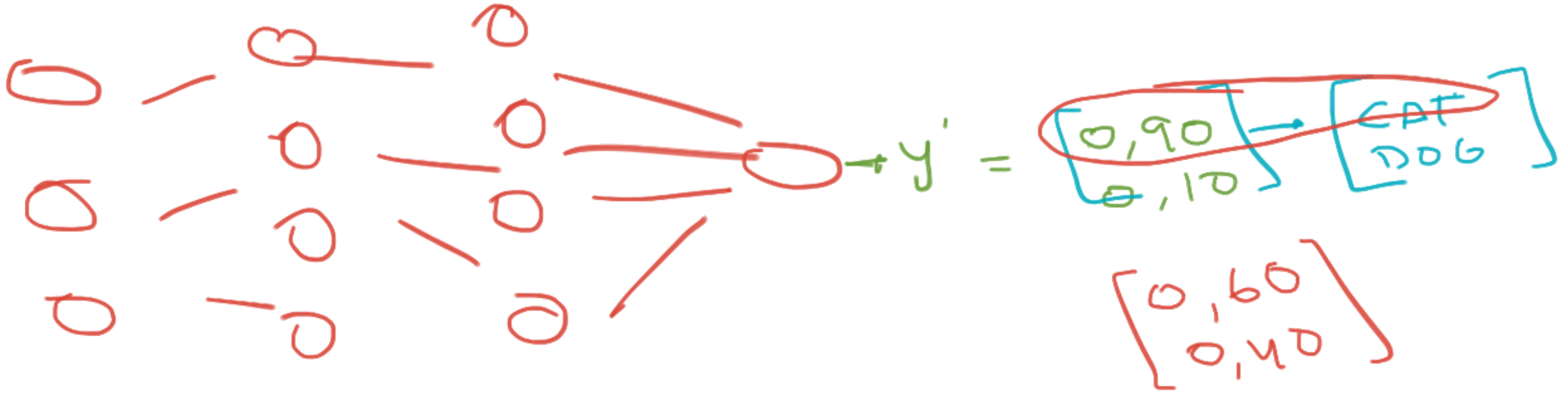

f( )
f( )
f( )




I
H1
H2
O

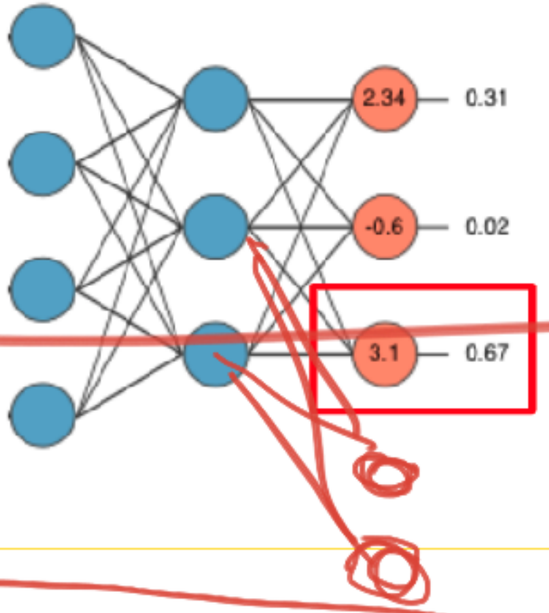

softmax
?




y' =
0,90
0,10
cat
DOG
0,60
0,40

5 Tipos de animales

Softmax
>2



0,70
0,10
0,05
0,10
0,05

Perro
Gato
Conejo
Cuy
Loro

ex 10

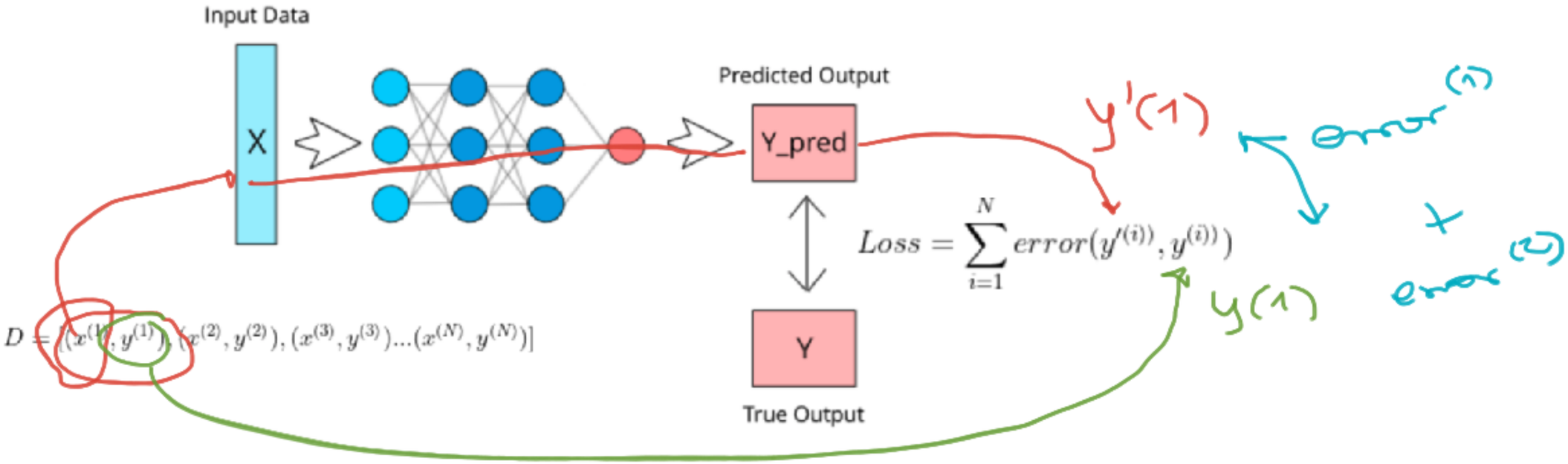
0 1 0 0 0

0,10
0,90
0,10
0,90

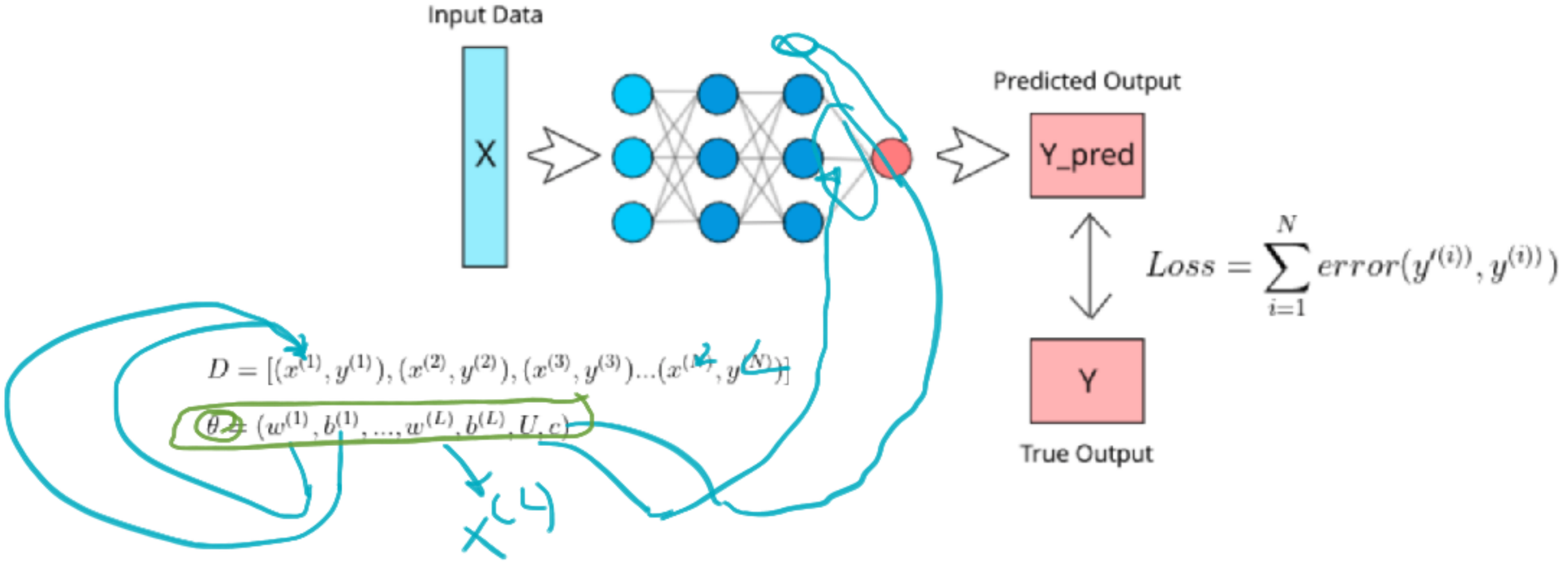
CAT
Dog

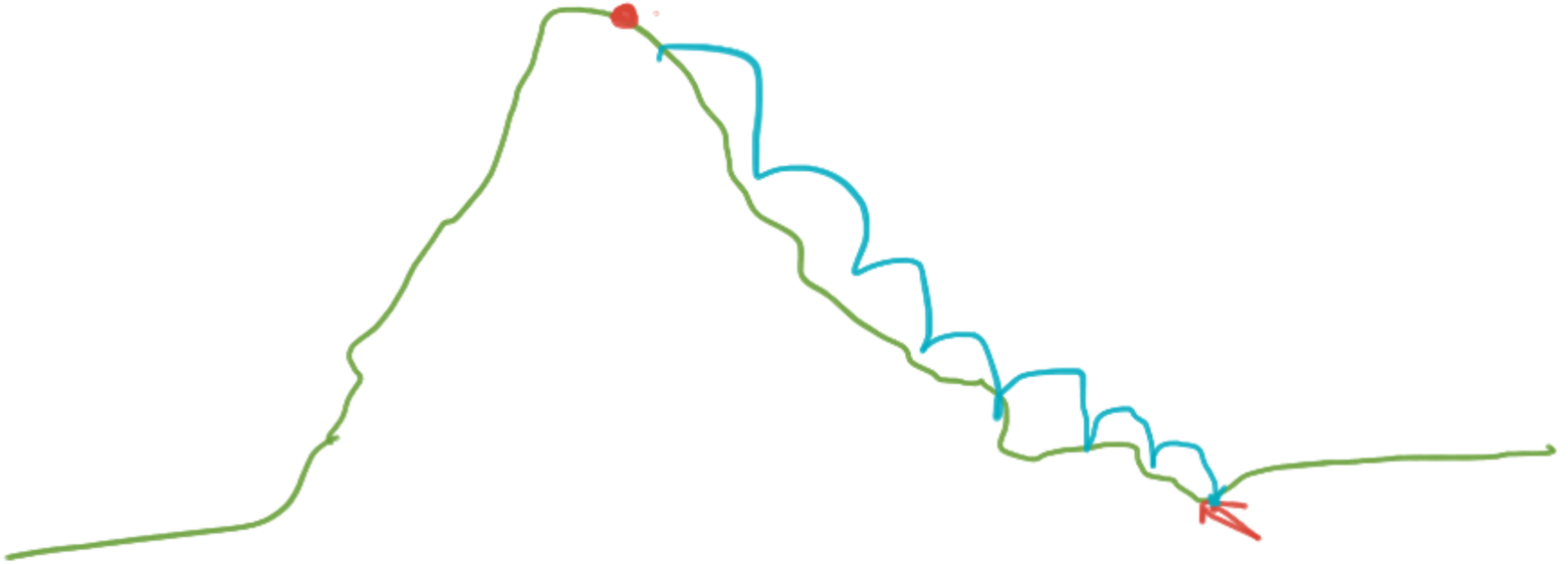
Sigmoide 2

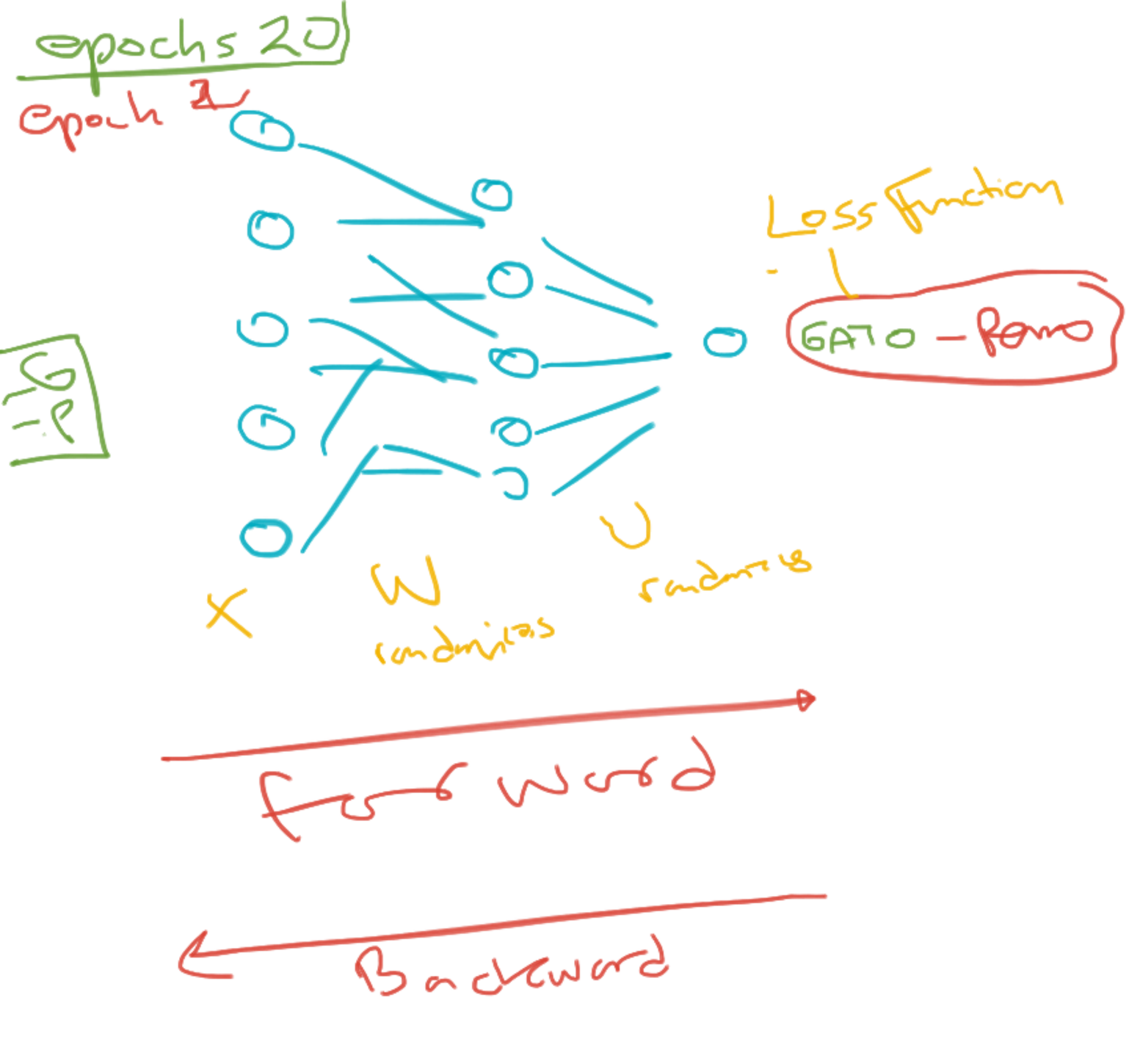
```
if (x>3):
    Print (Hola
else
    Print (Chau
```

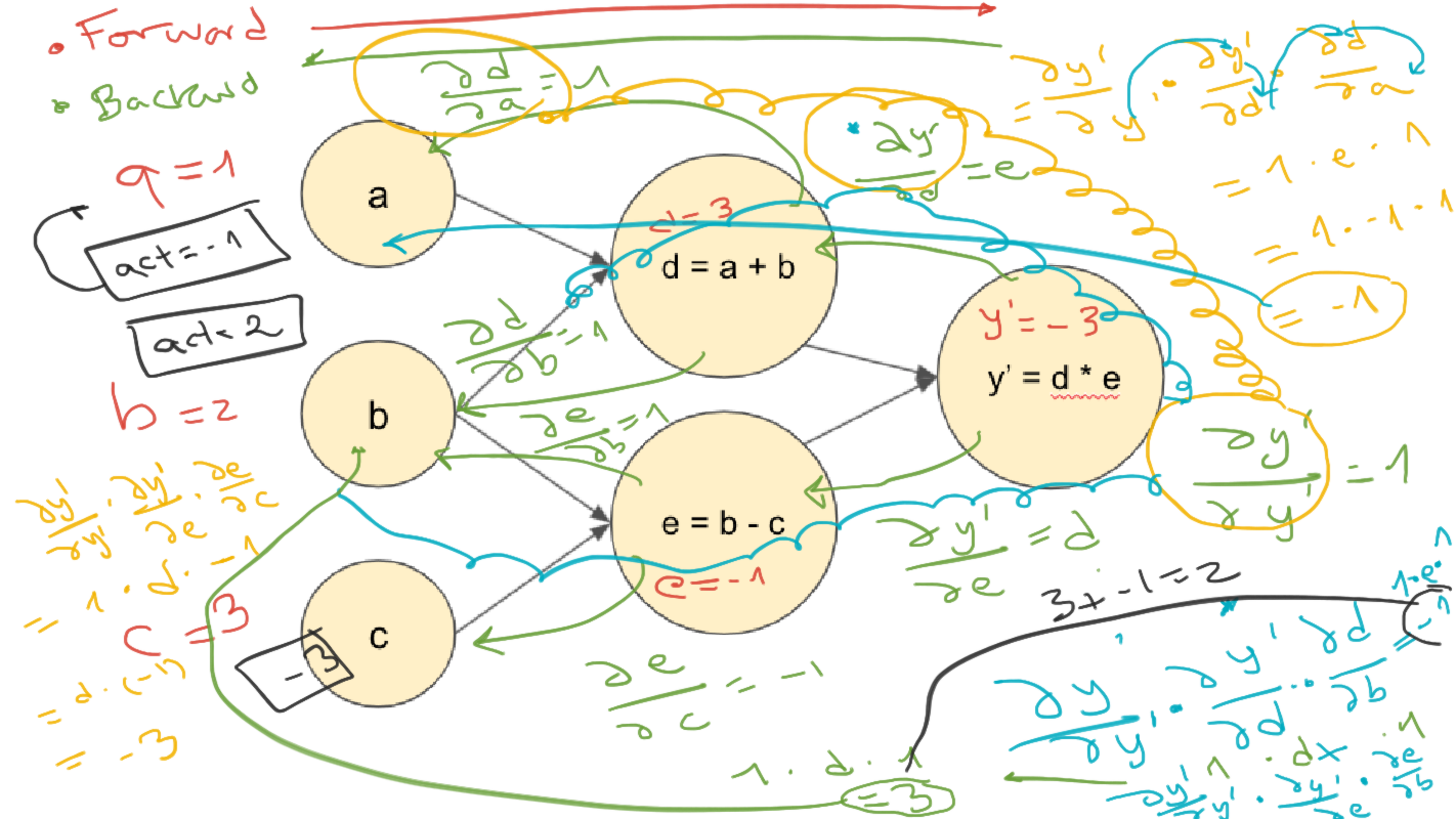

Input Data
X
Predicted Output
Y_pred
Y
True Output
$Loss = \sum_{i=1}^{N} error(y'^{(i)}, y^{(i)})$
$D = [(x^{(1)}, y^{(1)}), (x^{(2)}, y^{(2)}), (x^{(3)}, y^{(3)}) \ldots (x^{(N)}, y^{(N)})]$
y'(1)
y(1)
error(1)
+
error(2)

Loss (D)


Input Data
X
Predicted Output
Y_pred
Y
True Output
$Loss = \sum_{i=1}^{N} error(y'^{(i)}, y^{(i)})$
$D = [(x^{(1)}, y^{(1)}), (x^{(2)}, y^{(2)}), (x^{(3)}, y^{(3)}) \ldots (x^{(N)}, y^{(N)})]$
$\theta = (w^{(1)}, b^{(1)}, \ldots, w^{(L)}, b^{(L)}, U, c)$
$x^{(4)}$

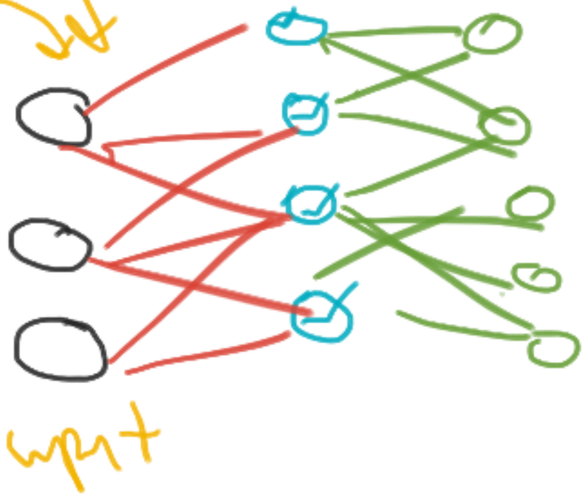



epochs 20
Epoch 1
Loss function
GATO - Perro
X
W
U
forward
Backward


Forward
Backward
a
b
c
d = a + b
e = b - c
y' = d * e
act=-1
act=2
-3

```python
import tensorflow as tf

inputs = tf.keras.Input(shape=(3,))
x = tf.keras.layers.Dense(4, activation=tf.nn.relu)(inputs)
outputs = tf.keras.layers.Dense(5, activation=tf.nn.softmax)(x)
model = tf.keras.Model(inputs=inputs, outputs=outputs)
```



```
Model: "sequential"
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
dense (Dense)                (None, 100)               10100
_________________________________________________________________
re_lu (ReLU)                 (None, 100)               0
_________________________________________________________________
dense_1 (Dense)              (None, 25)                2525
_________________________________________________________________
softmax (Softmax)            (None, 25)                0
=================================================================
Total params: 12,625
Trainable params: 12,625
Non-trainable params: 0
_________________________________________________________________
```