

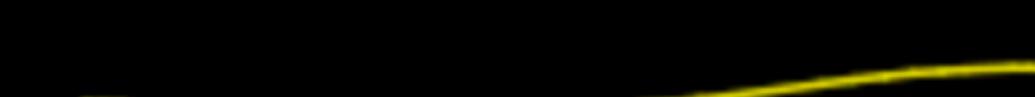
Juan claudio triviz ipat,

Patricia

↳ $\{f_1, f_2, f_3, f_4\}$ = Sätze

0 \times $\{$ \rightarrow $\text{DTR} \cup \{+$ $\text{tanh}, \text{tanh}^{-1}, \text{sin}, \text{sin}^{-1}\}$ $\}$ \rightarrow

A hand-drawn diagram of a circuit. The circuit includes a dependent current source labeled $LR(t)$ with a control voltage V entering its non-inverting terminal. The inverting terminal is connected to ground. The output current I is shown entering the inverting terminal. The circuit is connected to a power source labeled $S1 \sim P1$.

text  vectorization

quid | vide-

```

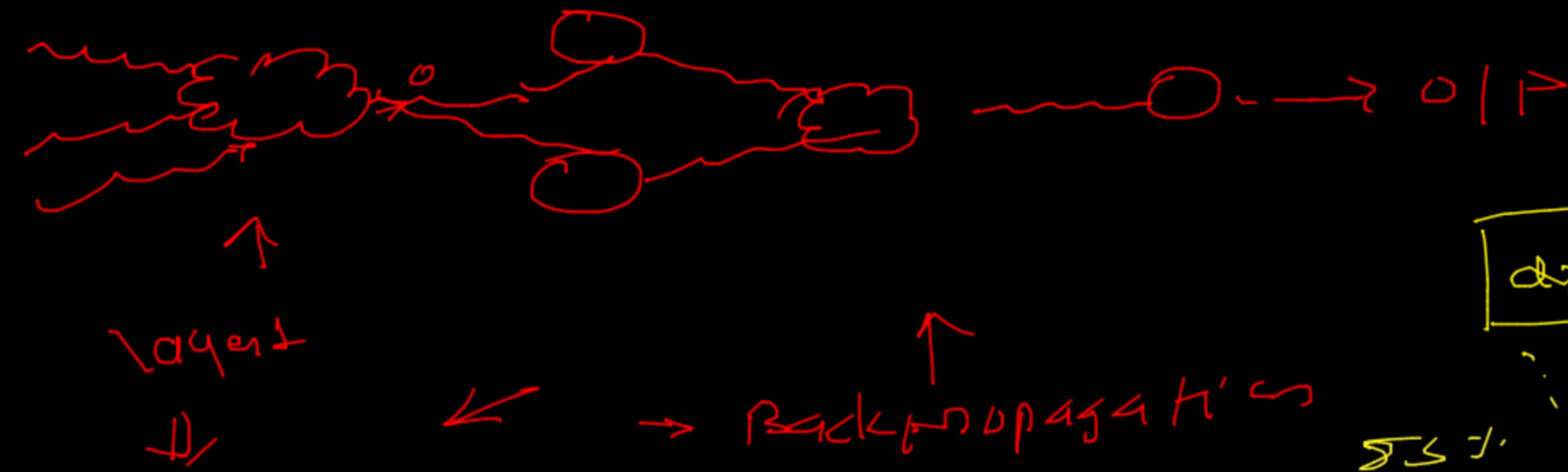
graph TD
    A[Raw Data] --> B[Vectorization]
    B --> C[Image]
    C --> D[Image Representation]
    style A fill:none,stroke:none
    style B fill:none,stroke:none
    style C fill:none,stroke:none
    style D fill:none,stroke:none
  
```

The diagram illustrates a sequential process. It starts with 'Raw Data' at the bottom left, which is converted into 'Vectorization' (represented by a wavy line). This then leads to 'Image', which is further converted into 'Image Representation' (represented by a dashed box). A large bracket on the right side of the diagram groups 'Image' and 'Image Representation' together, indicating they are closely related or part of the same process.

But complex

A hand-drawn diagram of a function $f(x)$ on a coordinate plane. The x-axis is labeled "real" and the y-axis is labeled $f(x)$. The graph shows a function that is constant for $x < 0$, then increases linearly for $0 < x < 1$, and is constant again for $x > 1$. The function is labeled $f(x)$ with a bracket under the graph, and "real $f(x)$ " is written below the x-axis.

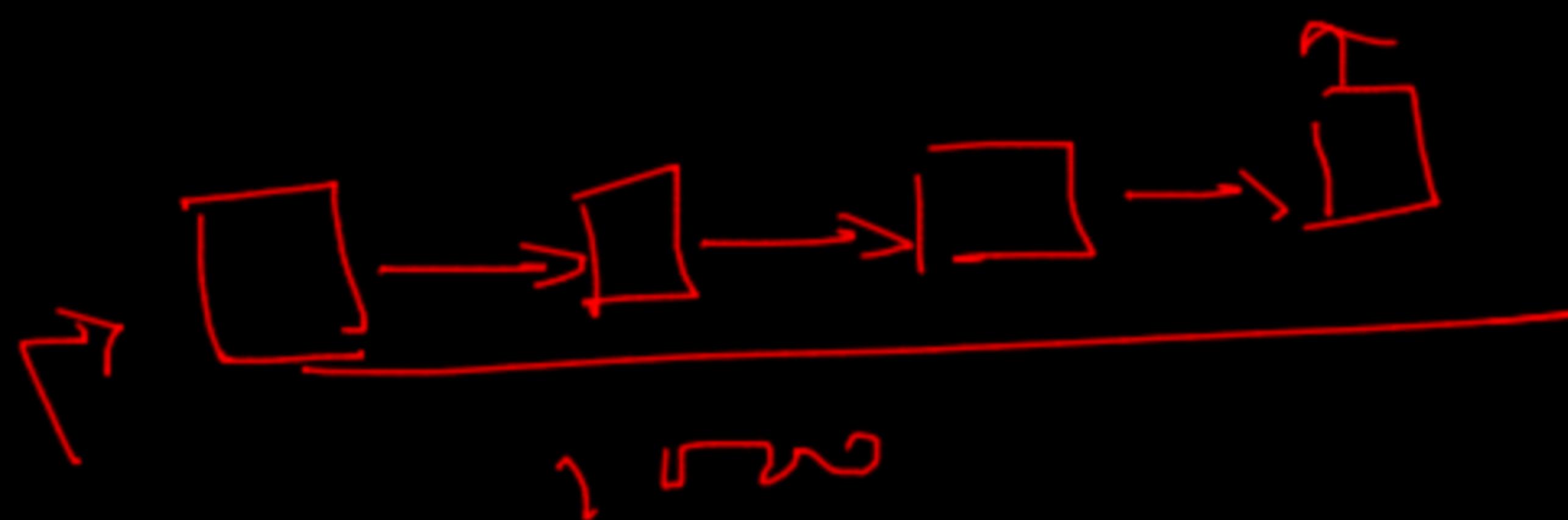
#



1986 \rightarrow 1986 \rightarrow 1986

1986 \rightarrow 1986

1986 \rightarrow 1986

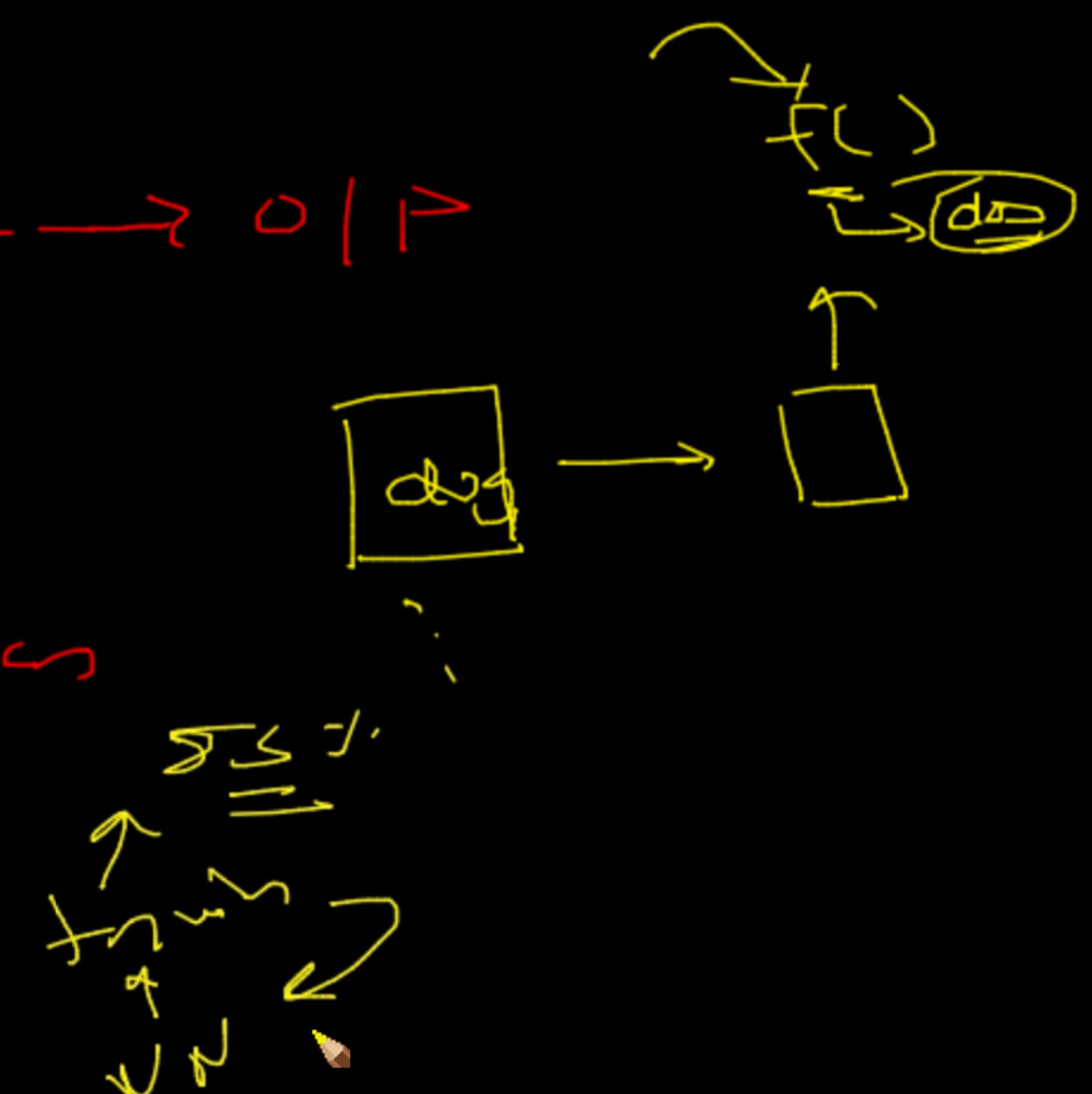
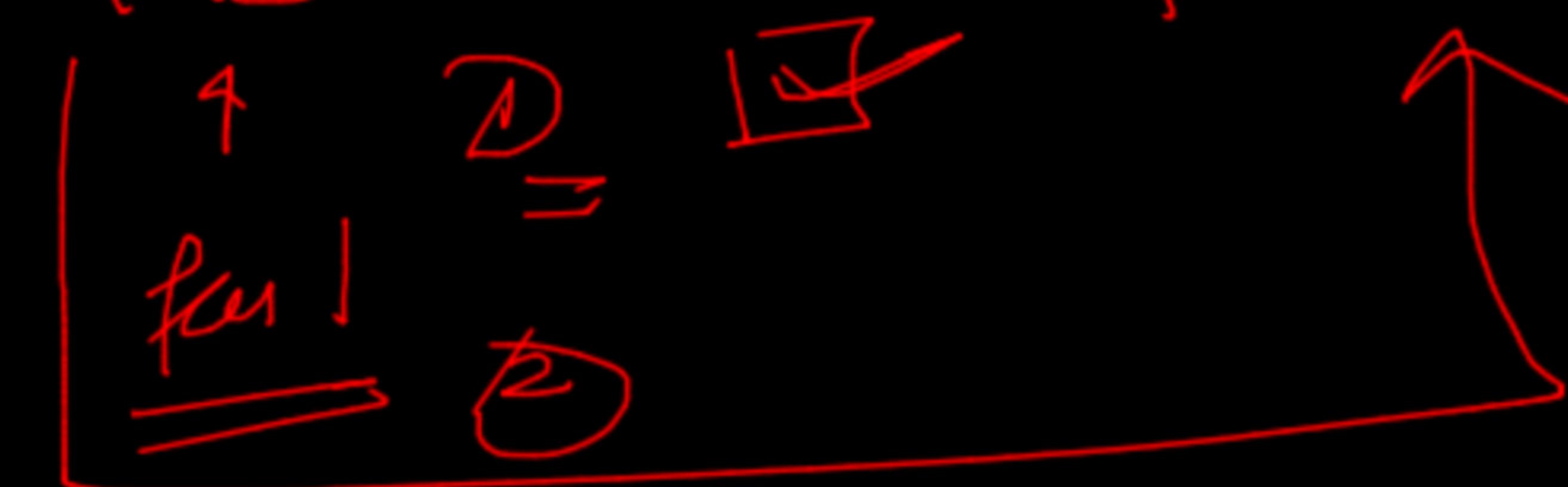


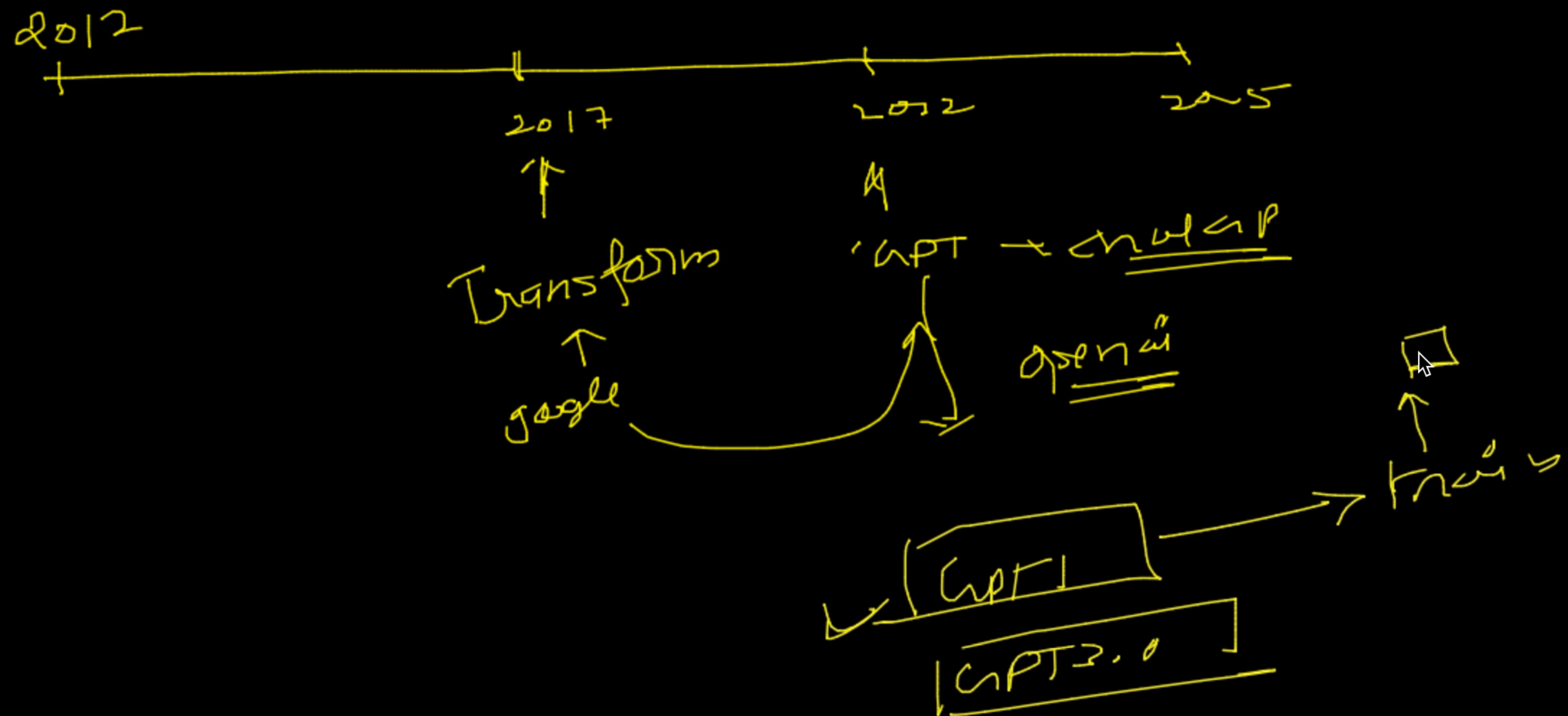
Backpropagation

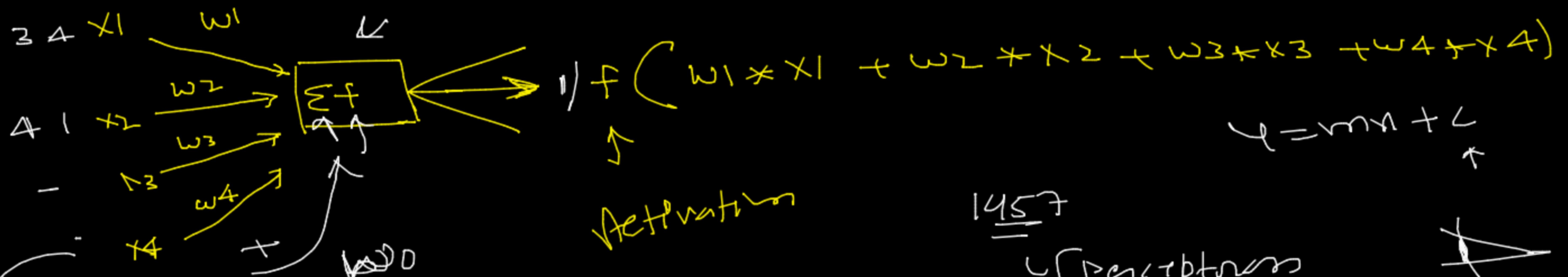
+

AT -> 1990

1990 \rightarrow 2006 \rightarrow 2012



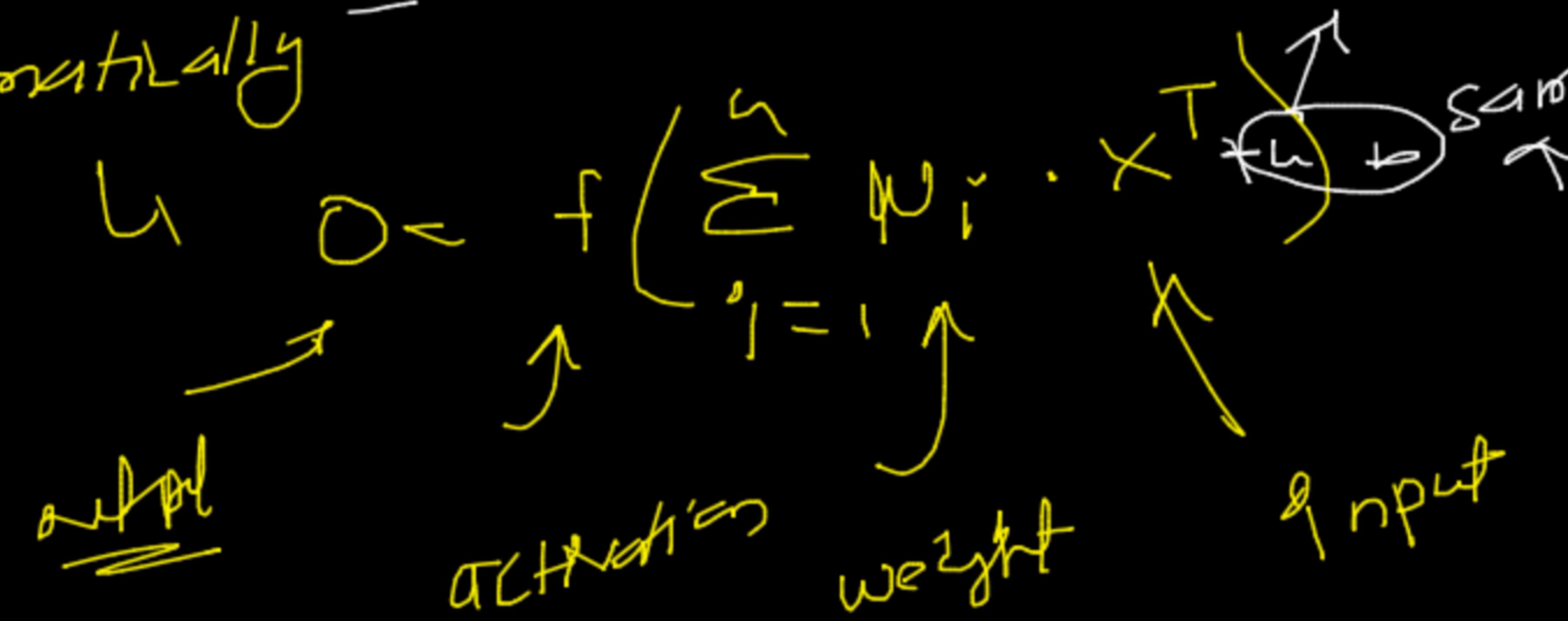




activation

1457

perceptrons

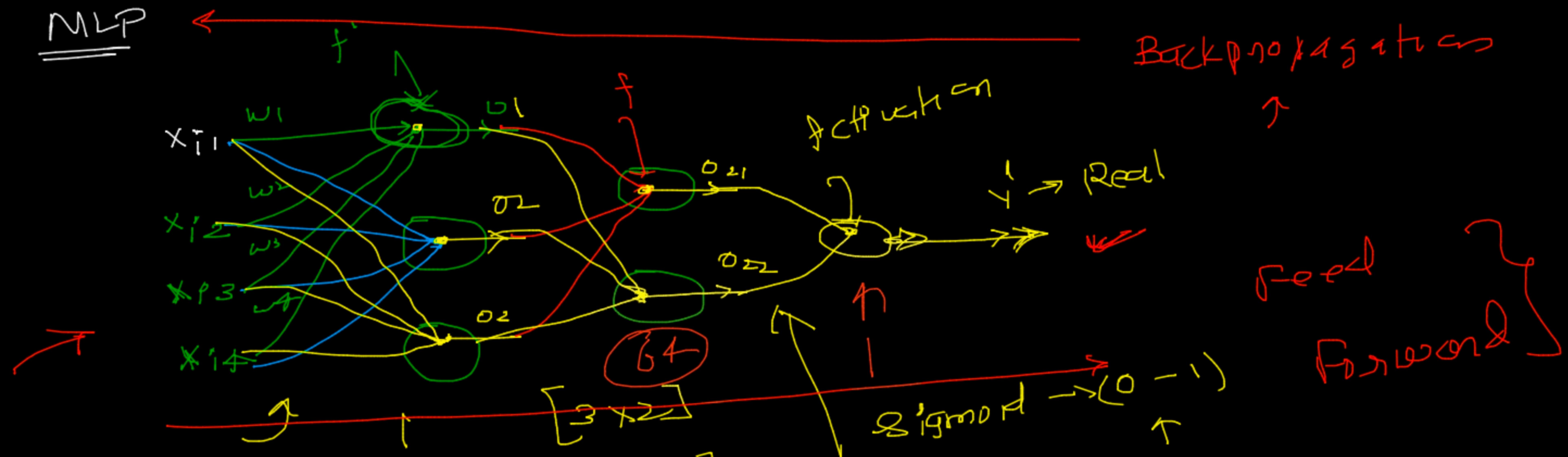


f

$$f(x) = \begin{cases} 1 & \text{if } w^T x + b > 0 \\ 0 & \text{otherwise} \end{cases}$$

identity f^n





2 + 1

A simple yellow line drawing of a face. The face has a wide, open mouth and a small tuft of hair on top of its head. The drawing is done in a loose, sketchy style.

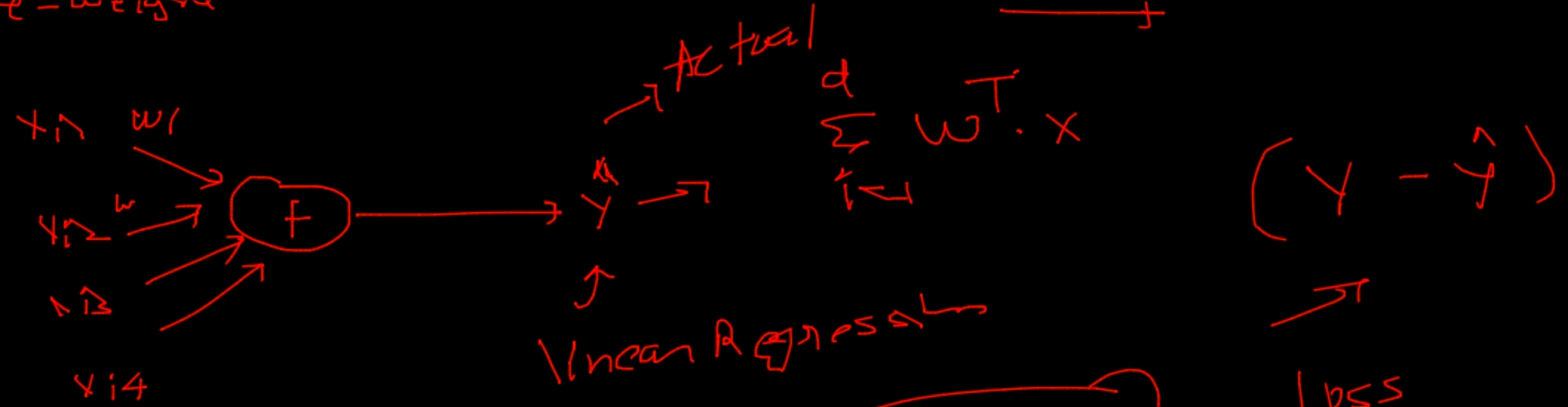
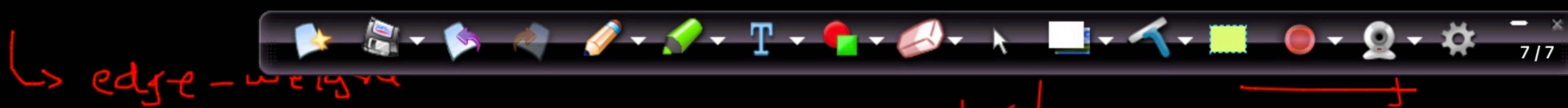
12 weights \rightarrow { w1 w2 w3 w4
w5 w6 w7 w8
w9 w10 w11 w12 }

20 → find out = "Aundo" ↗

Parameters

→ ~~78~~ Person

Train a single Neuron model



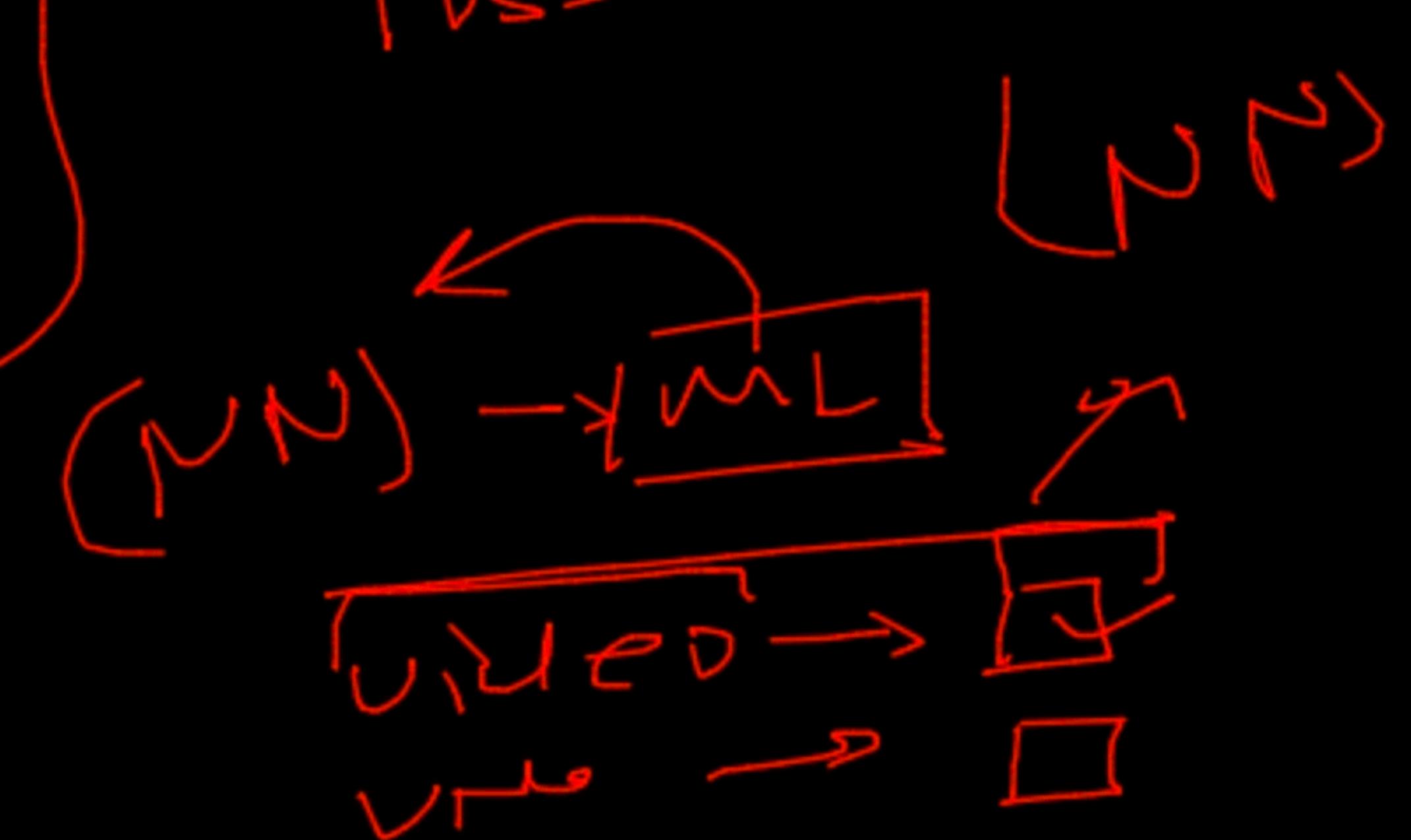
↓

Linear Regression

$$L = m \sum_{i=1}^n (y_i - \hat{y}_i)^2 + \text{reg}$$



$$\text{Loss} \rightarrow \sum (y - \hat{y})^2$$



i.e. (step 1) Define loss function

$$L_i = \sum_{i=1}^m (y_i - \hat{y}_i)^2 + \text{reg}$$
$$(y - \hat{y}_i)^2$$

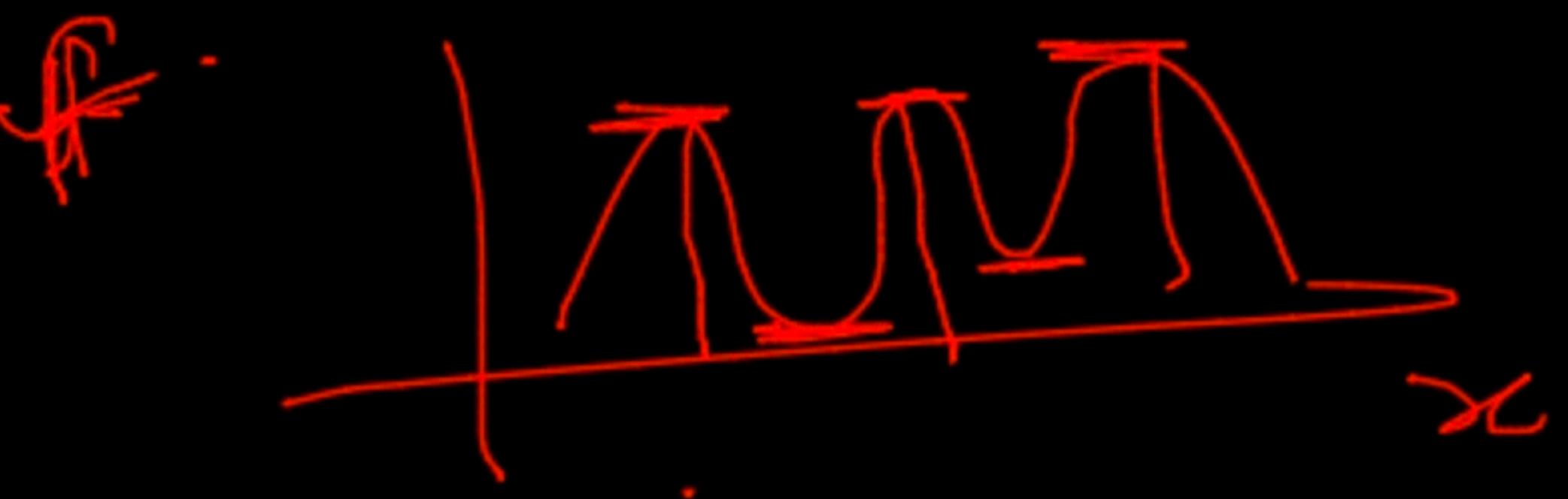
$$w^* = \underset{w}{\operatorname{arg\,min}} \sum_{i=1}^n (y_i - \hat{y}_i)^2 + \lambda w_1$$

Step 3 \rightarrow using SGD algorithm

1
INN
y
'sequential'
 \rightarrow

$$\begin{array}{l} \max \\ \uparrow \\ x = \\ \downarrow \\ x \in \mathbb{R} \end{array}$$

$$\begin{aligned} f(x) \\ f = \sin x \\ \uparrow \end{aligned}$$



maxima ? } \rightarrow ~~yes~~
minima

\downarrow
derivative