

# NN . cont (P2)

- for starters  $\odot$  neuron  $\rightarrow$  hold a number (suit a thing)  
(num  $0 \rightarrow 2$  here)

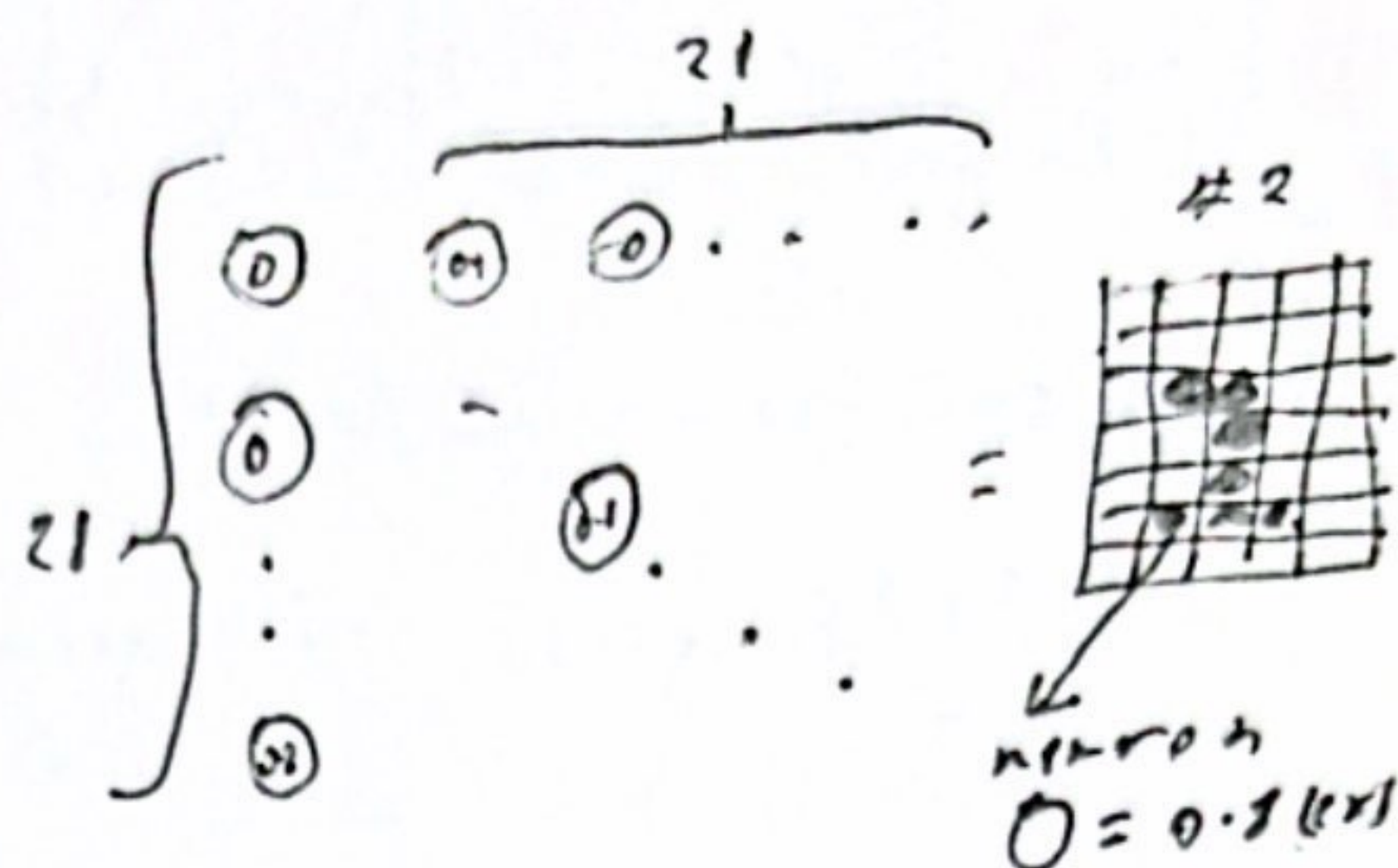
- each  $28 \times 28$  pixels 784

corresponds to a neuron

784 total neurons each

holds a number this

makes up the img



- the pixels gray scale val = the neurons number (val)  
0 for black pixels 2 for white pixels and others in between

- this number is  $\odot$   $\rightarrow$  activation of neuron 784

- the 784 neurons are the first layer of NN (input layer)

- the last layer has 10 neurons for digits 0-9

- the activation in last layer's neurons (0-1) represents how much computer thinks the img given is of

this digit  $\rightarrow$  784  $\left\{ \begin{matrix} \vdots \\ \vdots \\ \vdots \end{matrix} \right\} \rightarrow \dots \rightarrow \left\{ \begin{matrix} \vdots \\ \vdots \\ \vdots \end{matrix} \right\} 9 = \odot$   $\rightarrow$  H.O.S neuron is 0-1

- the layers in between are hidden layers which is the part that learns in this or we can have 2 hidden layers  
you can choose as many as you want

- here the activations of one layer determine the activations of a another. the input causes specific activations in one layer which cause specific activations in next layer and so on until final layer gives us an answer
- and the brightest neuron of output layer is final ans (digit)