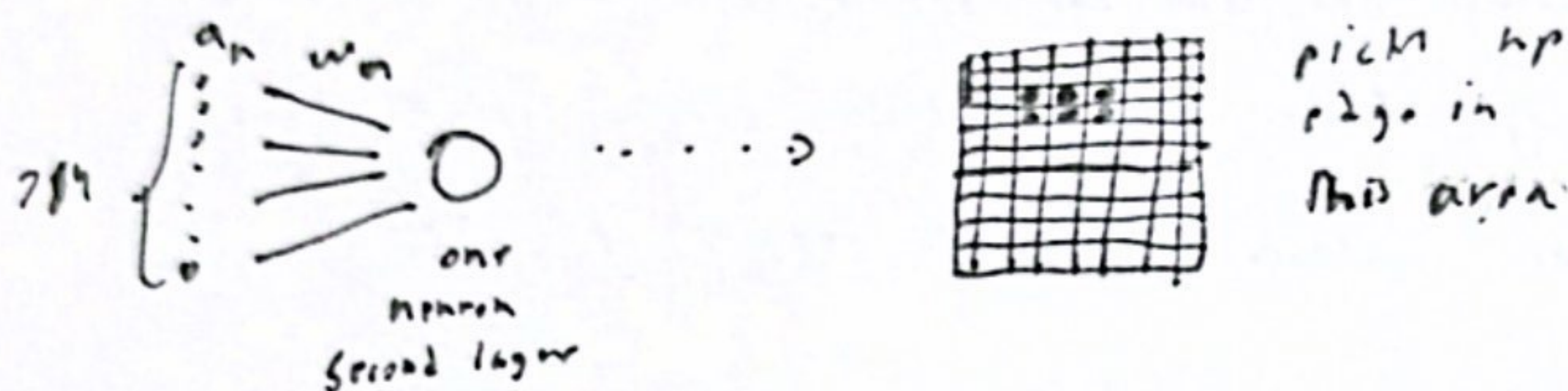- in the last page we had patterns and edges
but how do we detect edges ?
we teach the NN

- Ex lets say we wanted one neuron in second
layer to detect a specific edge in the img

pick up
edge in
this area

? what parameters should there be so that we can
dictate what input neurons should be accociated
with this one neuron ie it given 7 what
parameters should we have so that this one neuron
lights 7

- So we assign a weight to the connection between
the input neuron and the one neuron in second layer

- then take all activation from first layer ie the numbers (0-1)
and compute a weighted sum with the weights we have

Ex: $W_1 a_1 + W_2 a_2 + W_3 a_3 \cdots W_n a_n$

- Now this sum dictates whether the one neuron is activated

- the
overlap
is
Not
perfect
but its
there

- overlaps
with our
region

- pos weights for
area and overt neg
weights for areas
we dont
want for this neuron

then the sum is largest
when the middle pixels (green)
are bright and surrounding
pixels (red) are darkest