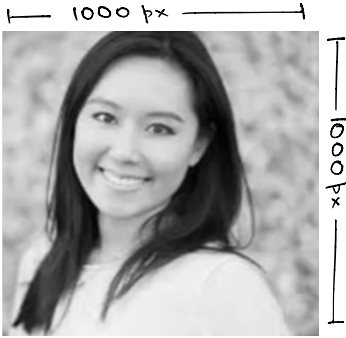


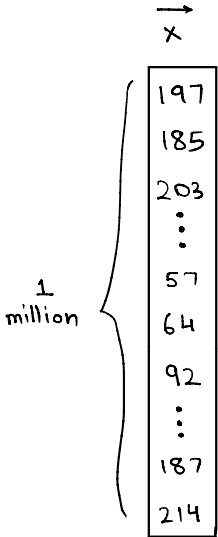
Face Recognition



representation
→

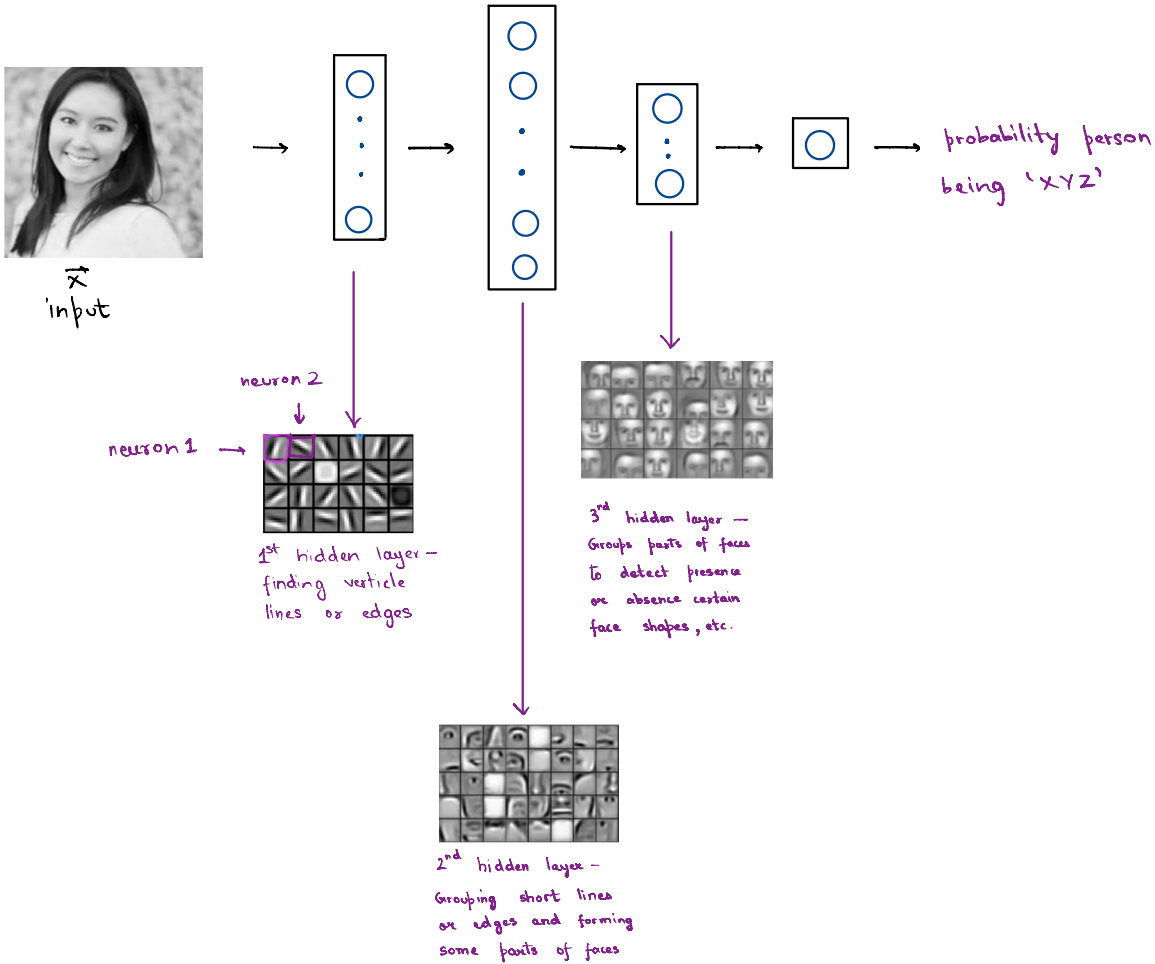
197	185	203
•	57	64	92	..
•				
•		..	187	214

1000 × 1000 grid
of pixel intensity
values

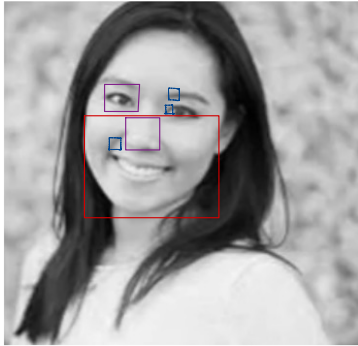


→ train a model with this input → outputs identity of the person in the picture

Neural network



The fun part is that the neural network learns all the feature detectors in the hidden layers all by itself, for example - no one told it to look for short edges/lines in 1st layer, eyes or nose, etc (facial parts) in second layer and complete features in third layer.



1st Hidden
layer
(smallest
picture)

→ 2nd Hidden
layer
(slightly
bigger picture)

→ 3rd Hidden
layer
(bigger
picture than
2nd layer)

Another example :- car identification using neural network

