

DAY-1

→ Computer Vision - giving machines an ability to see and understand images like humans.

↳ To give this artificial vision to computers we use a method that is used by us humans i.e; a large labelled dataset of images (that helps us ^{identify} ~~iden~~ understanding what are we seeing) and a method to process visual input data and compare it with this labelled dataset. (which is done using artificial neural networks)

→

→ Storing an image: An image is made up of an arrangement of pixels.

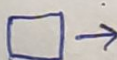


* pixels - smallest unit of an image (which are the building blocks of an image.)

It is a small block that is filled with only one solid colour.

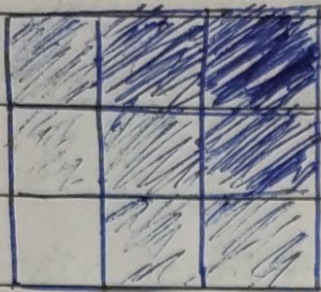
Now for storing an image we need to store two things

- Data stored in each pixel
- arrangement of the pixels

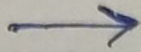
This is done by converting storing the data in a pixel in terms of intensity of white light in it (for B/W images) using an 8 bit no. (0-255)

 → 255,  → 10,  → 100

And then storing this data sequentially in form of a 1-D array.



image



100	60	30
200	100	60
255	200	100

pixel data



100	60	30	200	100	60	255	200	100
-----	----	----	-----	-----	----	-----	-----	-----

image in memory

★ for a coloured image we use an overlap of 3 different values for each pixel corresponding to intensity of Red, Green & Blue light.

