

Robotics Club

Presents

Automation Workshop

on

Image Processing

Why Images ?..

- Better representation of real world data.
- Easily transferable and human understandable.

Pros:

- Easy for humans to understand and analyze.
- Gives a better perception of features that could be extracted and processed in a humanly way

Cons:

- Heavy to process and has a high computation burden.
- Extracting underlying features which looks natural to us might be tougher for a computer to.

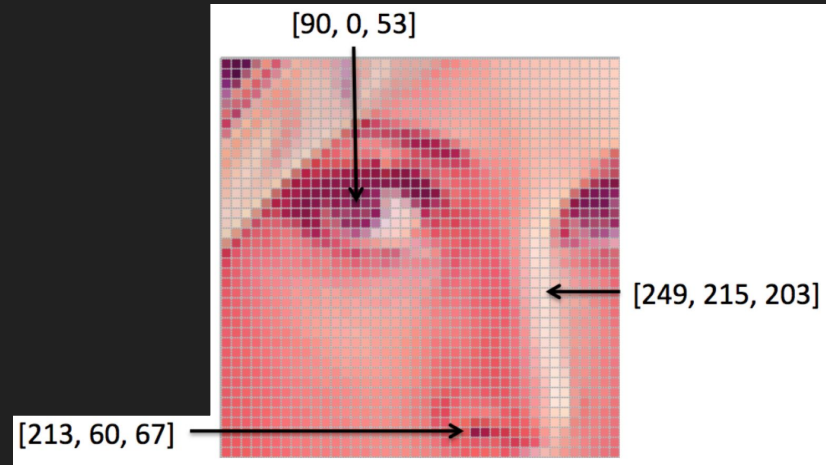
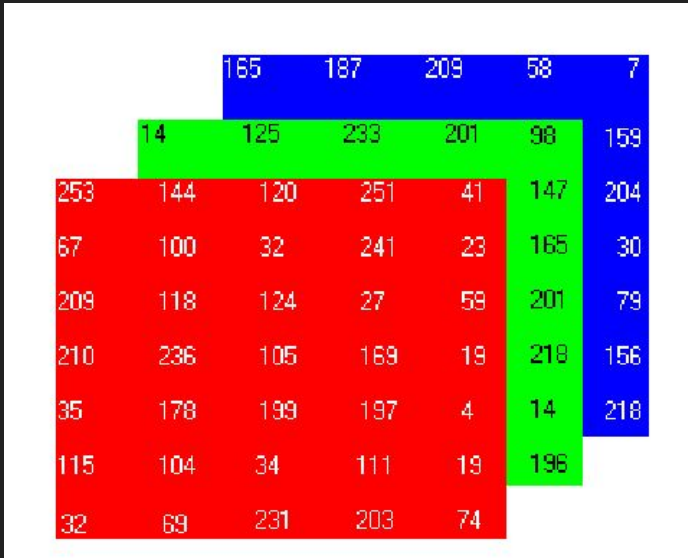
What are images ?

(well we all know it)

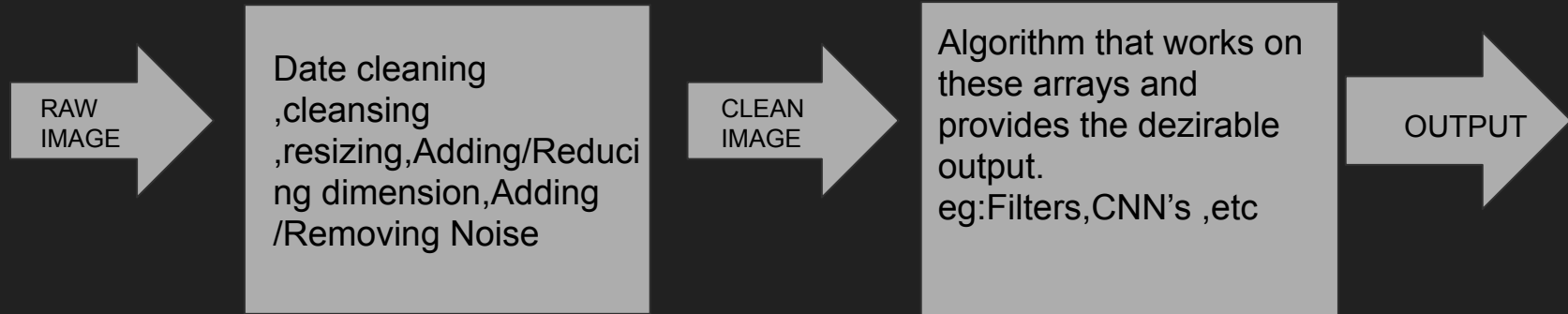


What are images to us ?

Answer: MERE NUMBERS AND DIGITS !!!!!!!!!!!



Data flow pipeline in any image processing framework:



What is OpenCV ?

OpenCV - Open Source Computer Vision Library

An Open source library written in C and is developed exclusively for Computer Vision and Image processing enthusiasts to dive deep into the concepts without worrying about everything from scratch. It is a collection of hundreds of image related algorithms that are ready to use out of the box.



Why OpenCV ?

Answer : It blends well with Python !!!



OpenCV
+C++



OpenCV+
Python

Well a tip not a task.....

- 1.Usage of Functions ,classes ,etc(OOP-Concepts in short) while developing.
- 2.Usage of a text editor / IDE for you projects.



Ready

Set

Code.....

Finally.....

```
print (Image_Processing == Cool)
```

```
#output:True
```

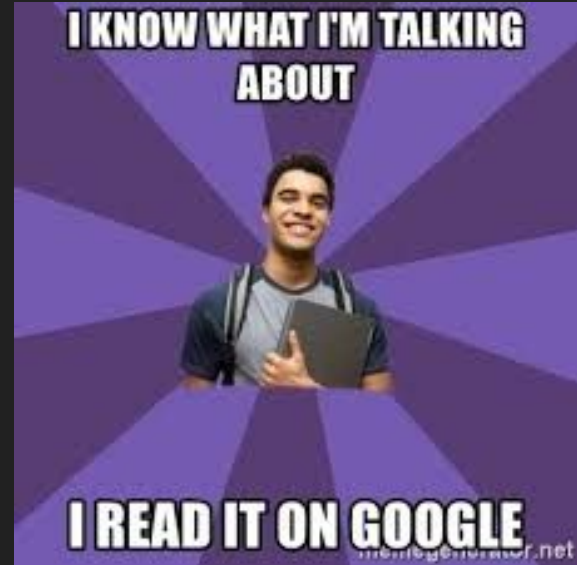
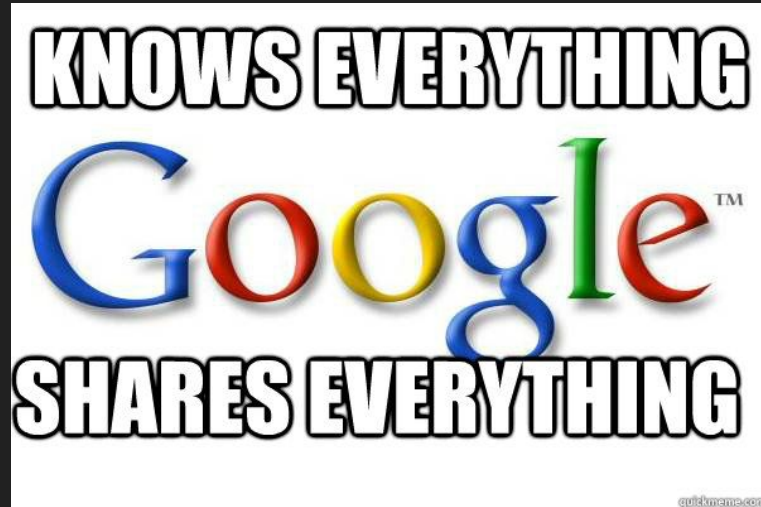
```
print (Image_Processing == Simple)
```

```
#output:True
```

```
print (Image_Processing == Easy)
```

```
#output:False
```

Then how do we master it ?



Links and Resources:

1.Sentdex Tutorial Series:

<https://pythonprogramming.net/loading-images-python-opencv-tutorial/>

2.OpenCV Documentation:

- https://docs.opencv.org/3.4/d2/d96/tutorial_py_table_of_contents_imgproc.html
- https://opencv-python-tutroals.readthedocs.io/en/latest/py_tutorials/py_imgproc/py_table_of_contents_imgproc/py_table_of_contents_imgproc.html#py-table-of-content-imgproc

Feel Free to contact us....

If(answer_not_found_in_google == True):

Contact:

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Else :

Google till u get it.